

SNEAK PEEK! New Microsoft Office v.X for Mac—OS X's Savior?

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MacAddict

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NOVEMBER 2001 NO. 63

Go Mobile!

The Ultimate Mobile-Mac SuperGuide

- 42 Must-Have Mobile Goodies
- Travel Secrets of the Pros
- Survival in a Wireless World
- PDA Power-User Tips & Gear



REVIEWED:

Dual 800MHz Power Mac • Painter 7 • PageMaker 7.0
Toon Boom Studio • Alice • Suitcase 10 • Stitcher 3.0
Epson Stylus Photo 785EPX • Summoner • and more...

Put Your Résumé Online • Gamer's Holiday Wish List • Pro Audio Tips



"The PowerBook G4 is a landmark hardware achievement. The titanium laptop blew me away."

—Jon Fortt, The San Jose Mercury News

"...if you could take just one laptop along with you on a desert island, this would be the one."

—Hiawatha Bray, The Boston Globe

"Apple's new laptop is a peach..."

Apple has once again launched a powerful innovation — and could literally reshape the laptop."

—Steve Wildstrom, BusinessWeek

Too bad you only have one lap.

"Whether you need it or not, I guarantee you'll want one. If you've ever suffered

Sony Vaio envy, this PowerBook will end it once and for all."

—Bob LeVitus, The Houston Chronicle

"I think the new PowerBook G4 Titanium is the most impressive notebook computer ever."

—Peter Lewis, Fortune, February 19, 2001



Titanium PowerBook® G4.



The new iBook.

"I have a new favorite laptop."

—Jim Heid, The Los Angeles Times

"At 4.9 pounds with a full complement of ports and a CD or DVD drive, the new iBook is the lightest, smallest full-featured consumer portable I've seen..."

—Walter Mossberg, The Wall Street Journal

"The iBook, richly featured and starting at \$1,299, is close to ideal for students."

—Steve Wildstrom, BusinessWeek

"The new iBook is simply the best consumer laptop on the market today. Dell, Compaq and the others should be ashamed they haven't come close to building a laptop this cool and at this price."

—David Coursey, ZDNet Anchor Desk



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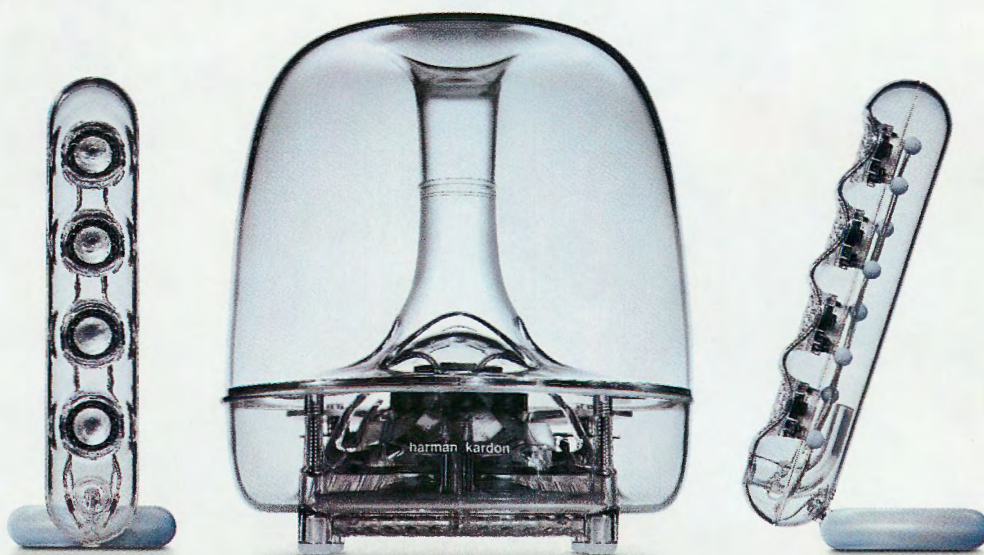


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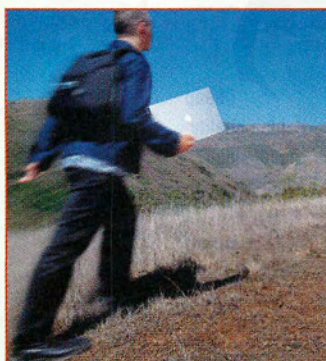
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highlights

22 Go Mobile!

If you're going stir-crazy holed up in your lightless cubicle, we suggest you hit the road—and take your Mac with you. Learn about the coolest portable gear, share our best travel secrets, and find out how to free yourself from wires for the ultimate mobile-computing experience.

by Alan Stafford



Down this trail and over that hill, I think there's a Starbucks.

34 Get a Job

The great Internet implosion may have put you out of a job, but the Web can also help you find one. Whether you're a newbie or an Internet guru, we'll give you great tips on how to put your resume online and make yourself really stand out from the masses.

by Niko Coucouvanis

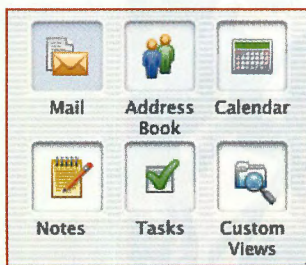


Please hire me, I'm too rude to be a waiter.

41 Office Turns X

Microsoft Office and Photoshop are arguably the two most important apps yet to be made Mac OS X capable. Photoshop is still a no-show, but Office is about to go full-bore Aqua. Here's a sneak peek at Microsoft Office v.X for Mac—and how it whups Office 2001's butt.

by Rik Myslewski



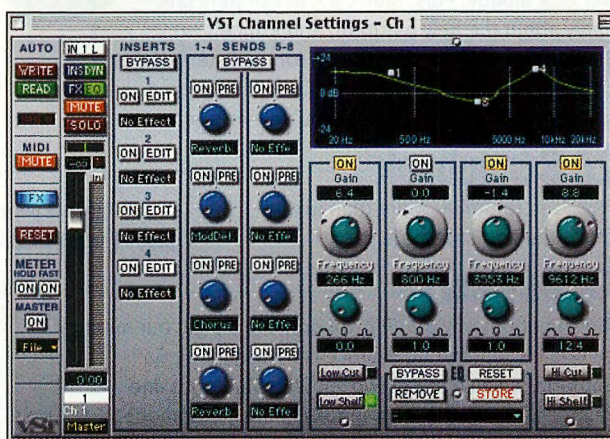
Is this Holly-Word Squares? When was Whoopi replaced by Tasks?

how to

66 Get Great Sound

You have audio-recording software—you even know how to use it. So why does everything you record sound flatter than a pancake? Find out the secrets to creating top-notch mixes that'll bring music to your ears in full-spectrum stereo.

by Andrew Tokuda



Are you Mac Mixmaster, or just MC Chump?

70 Edit a Multiple-Angle Scene in iMovie

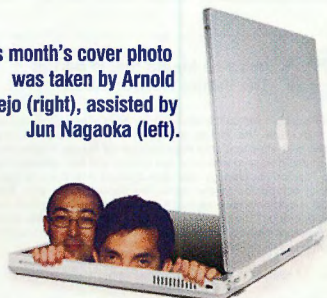
You can be an ordinary moviemaker or an extraordinary one. Get ready for your close-up as we guide you through shooting a multiple-angle scene and show you how to edit your footage in iMovie to make it more compelling.

by Jason Whong



Europeans fret on film about personal space issues.

This month's cover photo was taken by Arnold Tiosejo (right), assisted by Jun Nagaoka (left).



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every month

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Our intrepid editor in chief searches for a soul. Yours.

12 Letters

Readers set themselves on fire and electrocute their bosses. Do not try this at home.

14 Get Info

This month, DV goes primetime and the browser war gets bloody. Plus, Mac OS X developers talk freely about the new platform, and Prince's art director reveals how to make art for rock-star albums. Listen to CDs and MP3s, get audio in, and drool over the smallest 4-megapixel camera you've ever seen.

20 Scrapbook

What's in Gnutella? More than just chocolate and hazelnuts.

46 Reviews

Did somebody say *dualie*? Not only did we get our mitts on Apple's top-end Dual-processor Power Mac G4 800MHz, we also rolled two 7s: PageMaker 7.0 and Painter 7. Add to that two spooky games, Summoner from GraphSim and American McGee's Alice from Aspyr; two cool audio apps, Onadime's Composer 1.4 and Propellerhead's ReCycle 2.0; two new color printers from Canon and Epson; and loads of other handy hardware and software. And yeah, we reviewed them all.

64 Powerplay

It's that time of year. Developers are madly popping No-Doz 'round the clock to get their games on store shelves in time for the hols, while hard-core gamers madly count their pennies. We've got the scoop on when your favorite games are due to ship. If visions of Myth III, Baldur's Gate II, Black & White, and Otto Matic dance in your head, create your own wish list from ours, and distribute it to all.

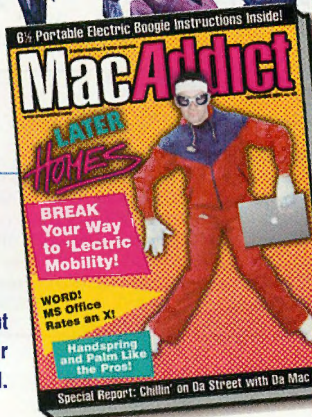
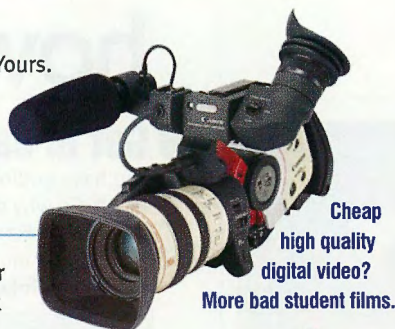
74 Ask Us

Not privileged enough to take out Mac OS X's Trash? Having Note Pad withdrawals? Does your overwhelming collection of browser bookmarks make you feel like a strung-out librarian? Take a chill pill and get the answers to your woes right here.

96 Shut Down

Sometimes we're so gosh-darn creative we can't stop at just one cover. Find out what almost made it onto the front of this month's *MacAddict*.

If it were 1982, we might expect design awards for this one. Oh well.



MacAddict

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editor's note

Who am us, anyhow?

When I first set foot in MacAddict's palatial command center last month as its new editor in chief, it was like walking into a party that had been raving along unabated for a full five years. Hilarity. Passion. And a no-holds-barred dedication to getting down, getting funky, then getting back up again.

I'm rapidly getting to know my fellow editorial hosts of the MacAddict bash, but finding out about you, our readers and guests, has been more of a challenge.

First I lurked in MacAddict.com's forums, hoping to plumb the soul of that elusive—and possibly impossible to identify—entity, the Typical MacAddict Reader. I quickly learned that the word "typical" is not one that applies to our beloved forum devotees. Sure, I found out that the lovely and talented Miss Trish feels we've treated her shabbily, and that everybody is passionate about Digital Droo's unflagging commitment to The Disc.

But there are hundreds of thousands of MacAddict readers, and only a fraction of you fine, upstanding citizens can squeeze a few moments out of your busy days to contribute to the forum's lively discussions.

Letters to the editors helped—a bit. I learned that The Tiger is a Class A1 geek (and I mean that with admiration, Big Cat), and Robert Wolf can craft a kick-ass wind chime out of a crashed hard drive. (It's hanging proudly in our office, Robert. Thanks 10e6.)

But what about the rest of you? What floats your boats?

After a few futile weekends of tossing yarrow stalks and reading the entrails of doves, help came from the MacAddict marketing department—namely, a fresh-out-of-the-oven, comprehensive survey of our subscribers. You.

The results of this survey are enlightening, to say the least. First of all, you're 87.5 percent male. Now, I'm sure that many of you are 100 percent male or 100 percent female, but as a group you're mostly a bunch of guys—and well-educated, highly experienced guys to boot. Nearly 90 percent of you are college educated, with 40 percent having gone to graduate school. About 80 percent have been using a Mac for over ten years, and a



This man is 100 percent Polack and composed of approximately 65 percent water.

quarter of you have been Mac addicts since the introduction of the original Mac way back in the Paleolithic era.

While you're all most decidedly young at heart, more of you are over 50 (about 30 percent) than under 30 (about 20 percent). Your average income—over \$87K—proves that few of you work for Mac magazines. That average is even more startling in light of the fact that about 15 percent of you are students and 18 percent are teachers. No matter how you earn your living (only about 2 percent of you are unemployed—but hang in there, guys, it's going to get better), about a third of you have four or more Macs at home, and over three-quarters have at least two.

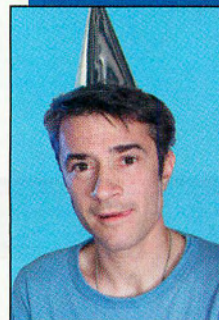
Nearly all of you are Web junkies, and 60 percent spend more than two hours per day online. Around three-quarters of you are also very interested in image editing, graphics production, and good ol' office applications. About half are also heavily into downloading, burning, and listening to music; Web-page design; playing games; and audio recording, editing, and performing. Creativity, thy name is MacAddict reader.

The top items on your holiday wish lists are CD-RW/CD-R drives, digital cameras, DV cameras, and LCD displays. Less than a fifth of you also own PCs (all is forgiven), but—more encouraging—only a measly 4 percent have any plans to buy one.

If you see yourself in these stats, great. If you don't, that's great as well. We'll help all of you get the most from your Macs, whether you're one of the 85 percent who consider yourselves expert or advanced or the 1 percent who are modest—honest?—enough to admit you're beginners.

Or, for that matter, if you're the one lonely guy who says the next Mac he's planning to buy is a Quadra.—*Rik Myslewski*

Staff Rants



Niko Coucouvanis

Reviews Czar

Q. What do you have in common with MacAddict readers?

A. I'm not the only one who lies pathologically to screw up surveys.

Q. How are MacAddict readers superior to the common rabble?

A. They're 87 percent more likely to have an advanced degree, they own 77 percent more Macs, they're 97 percent less likely to own fur, and they know that 66.6 percent of all statistics are fabricated on the spot.



Andrew Tokuda

Polisher of the Platter

Q. What do you have in common with MacAddict readers?

A. I know quality when I see it. I seek excellence. I am a winner.

Q. How are MacAddict readers superior to the common rabble?

A. They have a knack for spotting editors who are trying to butter them up.



Narasu Rebbapragada

Xtreme Editor

Q. What do you have in common with MacAddict readers?

A. We're extremists. What we love, we really love. What we

don't love can go where the sun don't shine.

Q. How are MacAddict readers superior to the common rabble?

A. In addition to having higher IQs, quicker reflexes, and saner psychological profiles, they tend to be better looking than average.

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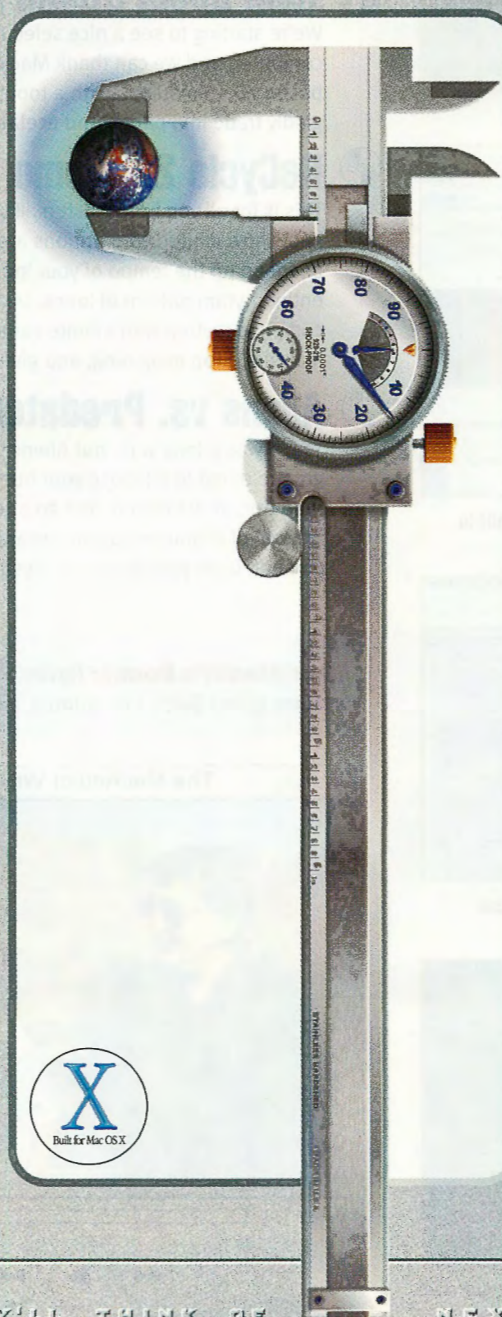
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So if you're the type of person with boundary issues, perhaps you should think twice before trying out the boundless capabilities of new Canvas 8. For the rest of you, we say more power to you—at only \$399 it's the best graphics software value on the planet.

DENEBA

IT'S WHAT THEY'LL THINK OF

NEXT

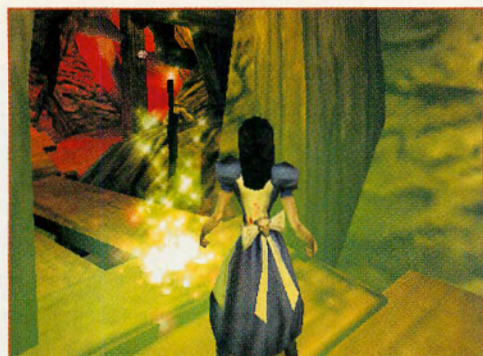
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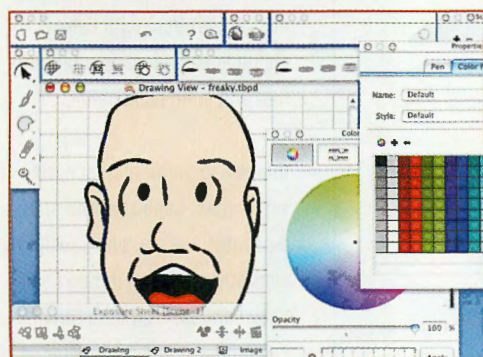
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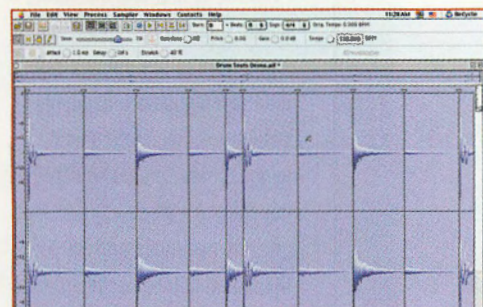
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Toon Boom Studio: You can draw if you want to, you can leave that pen behind...



ReCycle 2.0: Can you turn a polka into a bossa nova? Now you can.



Aliens vs. Predator: This is one guy you do *not* want to run into on your way to the bathroom at midnight.

Alice Demo

"Surreal" is the first word that comes to mind when you enter Alice's twisted Wonderland. Take hold of your lethal toys to combat the evil forces of the wicked Queen of Hearts and rescue Wonderland from her grip. Forget all you remember about the Alice you knew as a kid. Things have changed.

Toon Boom Studio Demo

We're starting to see a nice selection of professional tools for our favorite computer, and we can thank Mac OS X. Toon Boom Studio is great for Web-based 2D animations, with a tool set that'll make any traditional cel animator gladly trade ink, paper, and acetate for a mouse!

ReCycle 2.0 Demo

This is for all you beat masters. If you've ever worked with drum loops, you know how limited your options are. Imagine having the ability to slow down or speed up the tempo of your loops without a hiccup. Imagine changing the entire rhythm pattern of loops. Imagine having the creative freedom to compose rhythm with infinite variation even with the most limited of source material. Stop imagining, and give ReCycle 2.0 a trial run.

Aliens vs. Predator Demo

Yes, it was a long wait, but Aliens vs. Predator is here for the Mac, and we've got the demo to let loose your hunter instinct. Play the part of the Alien, the Predator, or the Marine and go after that ultimate prize—survival. With an arsenal of character-specific weaponry, you'll have hours of inter-species combat. Grab your mouse or joystick, and teach the enemy who's the boss.

This Month's Bonus: November Nitrozac Comics; "Best of Mac Show Live," volume 5; and Bert's Unix tutorial, part 2.



Rik and Niko are the newest members of the MacAddict team. Since we never really had a real welcome party for them, we found other ways to make up for it. If only we could do this every day...

If your copy of MacAddict didn't include The Disc, you need to upgrade! To subscribe, call 888-771-6222. The price is \$29.95 for 12 issues and 12 discs—the operator will take care of everything.



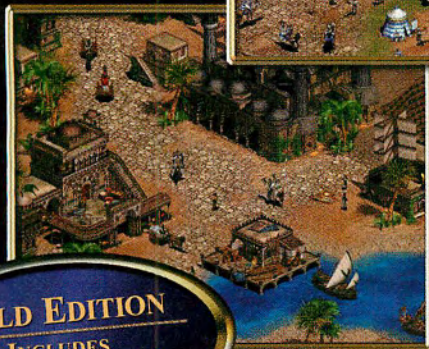
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SO WE SHOULD BE MORE SERIOUS?

I've been a Mac addict since the very early '80s. That puts me closer to 50 than to 40 years old, and my sense of humor is in that age bracket. I am a very, very, very busy graphic artist, mother, wife, volunteer (you get the picture), and I don't have time to waste on juvenile humor when I'm trying to find serious technical information. When reading articles like "10 Surefire Ways to Never Pay for Software Again" (Aug/01, p32) or "Failed iBook Campaign Slogans" (*Shut Down*, Aug/01, p96), I don't want to waste my time trying to decide if the information printed is the real stuff or a joke.

—Karren Loeb

SO WE SHOULD BE LESS SERIOUS?

Let's not forget what makes *MacAddict* great: entertainment and humor. Witness the September 2001 issue. The *Letters* section sucks. They're all "Oh, thanks for running this story," and "Hey, that last issue was dandy." Hello? Where are the crazed fanatics spouting off about shaving an Apple into their armpit hair? I want to see people so obsessed with Macs that they shamelessly draw Mac snow art (*Letters*, Sep/01, p12). I am expecting to laugh out loud several times while reading the next issue.—Fred Martin

You Know You're a Mac Addict When...

You've complained, whined, guffawed, grumbled, and carped that we've been omitting this section in recent issues. Calm down. It's back.

...you only eat burned food because it's Carbonized.—Ivan Thomson

...three out of four of your email addresses contain the words Mac or Apple.—Alden Dale

...you are taking a history test and you wish you had a Memory control panel.

—Andrew Todd

...you open a box of Smarties and eat only the colours (yes, I'm Canadian) that appear in the Apple logo.—Josh Hanff

...you tell people to "Microsoft off."—Eric Knibbe



Serious clowns read *MacAddict*.

THANKS, EMATE

Dude, "The Best and Worst of Everything Mac" (Sept/01, p22) was one of the best pieces of literature to appear in a magazine! Being an Apple fan since way back in the day, it's nice to see some of its lesser-known products, like the eMate, appear for everyone to see. I actually got to use an eMate at school, and I must agree, it's kind of useless except for special applications.

—Nick S.

THIS SHOCKING TRUTH IS BETTER THAN FICTION

September 2001's *Shut Down* (p96) has a picture of a man attaching alligator clips to his tongue and measuring voltages. This is not complete fiction. When I joined the U.S. Air Force as an Electronic Warfare Technician in 1991, my first supervisor was a Human Voltage Tester. When troubleshooting a loose and exposed aircraft wire, I was trained to get a digital multimeter and find out if there was any current flowing through the wire. My supervisor said "Bah!" to that newfangled idea. He would quickly swipe the exposed wire across his tongue and be able to distinguish from 5 to 40 volts of

direct current (VDC). His biggest triumph came when one of our big 150-pin connectors, known as a cannon-plug, was damaged during an engine removal. He was able to correctly identify the voltage of 14 wires. He later said that he couldn't taste anything for a week. The man's name was Staff Sergeant Danny Griffin, and this story is absolutely true.

—Daniel P.B. Howell, SSgt, USAF

GOOD LUCK

Kudos on your article titled "Filter Images with Graphic Converter" (*How To*, Sep/01, p70). We used it to create this picture (below), which we framed. My wife cries every time she sees it. Maybe if you publish it, she'll let me get that new 867MHz G4.

—Eric Grubb



How to turn your children into art.

FREE SPEECH ON FREEHAND

As the author of five books on FreeHand, and co-author of and contributor to five books on Illustrator, I would like to comment on the statements you made in your review of FreeHand 10 (*Reviews*, Sep/01, p44). You were very confused as to which new features are actually new to FreeHand 10. For example, you go on and on about the Perspective Grid. This is a feature introduced

in FreeHand 9. Also, you missed the new Print Area tool, and you seemed to go out of your way to try to find nasty things to say about FreeHand. Given all the inaccuracies in the review, a few of the program's excellent points got lost.—Santee Cohen

Corrections: Envelopes, Perspective Grid, Symbols, and Symbol Library are not new features of FreeHand 10. The spray and brush strokes are brand new, not enhanced, features of FreeHand 10. We apologize for the inaccuracies, but our rating stands—it's Spiffy.—Ed.

THE TAM TAM CLUB

I don't agree with your choosing the Twentieth Anniversary Mac as one of the worst hardware designs produced in "The Best and Worst of Everything Mac" (Sept/01, p29). At \$10,000, it was overpriced, but most of us paid \$2,000 for them in the firesale. With a G3 upgrade, they still stand up as great, beautiful computers. I don't think any computer company has made anything as beautiful.—Jim Lippold

CHRIS'S 15 MINUTES

I just wanted to let MacAddict art director Chris Imlay know that I look forward to seeing the cover of MacAddict every month

because it is so funny and cool. I especially liked the September 2001 cover where Steve Jobs is the center of a Mac flower. Does he display his art on a Web site?—Laelae
The art guy thanks you. It's hard for a magazine like MacAddict to compete on newsstands smothered with scantily clad beauties. However, Chris does not currently display his art on any Web site.—Ed.

NO

Hey, is there a chance you guys can hook me up with Mutant Editor #3 ("Create a Fake Person," Sep/01, p36)? She be hot!
—Brook Willard

DON'T TRY THIS AT HOME

I just wanted to let my fellow Mac addicts know about the phenomenal service I got from Apple Computer recently. My mother's 300MHz PowerBook G3 caught fire while I was playing Diablo II. Let's just say there was some popping, a lot of smoke, and a burst of flame into my crotch. I immediately called an Apple representative, who passed the information on to the technicians. Soon after, I received a call saying all I had to do was send in the PowerBook, and Apple would ship me a brand-new Titanium 500MHz PowerBook G4. I sent in my mom's 'Book on Tuesday, and we

had the Ti G4 on Wednesday. Now, that is some kick @\$\$ customer service.

—Brandon Whitestone

TOO FAST TO WRITE

I was too busy turning my Power Mac 9600/300 into a 400MHz G3 with FireWire and USB to write and tell you what a great article "Nitro-Burning Funny Macs" (Jul/01, p22) was.—John Harvey

Recently Sighted



A hard drive crash can be a nightmare, but all is not lost. Convert your hard drive into a wind chime. Remember to reuse, recycle, and annoy your neighbors.
—Robert Wolf

Let Freedom Ring!

Go Wireless with Macsense Aero Products

Free yourself from the tangle and expense of wires with the XRouter Aero and AeroCard. Share your Internet your way, without wires. Now all PowerBooks can go wireless!

The XRouter Aero is an AirPort-compatible Base Station that offers many more features. A 4-port 10/100Mbps switch connects any "wired" Macs or PCs to the wireless network. Web-based configuration provides quick and easy setup. The built-in firewall protects your data from outside intruders but allows you to host servers and play Internet games without security worries!

AeroCard is a wireless PCMCIA card designed for older PowerBooks* that are not AirPort compatible. With the AeroCard, every PowerBook user can enjoy the benefits of the wireless revolution. Let Freedom Ring!

* AeroCard is compatible with PowerBooks 2400, 3400, and G3s with a PCMCIA slot.



Macsense
www.xsense.com
(800)642-8860



Sign up to win a
free RF wireless
AeroMouse
(a \$69 value!)
<http://www.xsense.com/free/>

Outpost.com PC Connection ClubMac MacMall

get info

Meet the Stars Behind the Macs.

MiniDV Goes Prime Time

Why Camcorder Video Is Showing Up on the News

MiniDV is joining the big leagues. Those matchbox-sized tapes you use to make home movies are weaseling their way into national news broadcasts. The reason? For reporters chasing a story, the high quality and portability of miniDV makes it an attractive alternative to the traditional news camera.



Canon's XL-1 camera puts miniDV on TV.

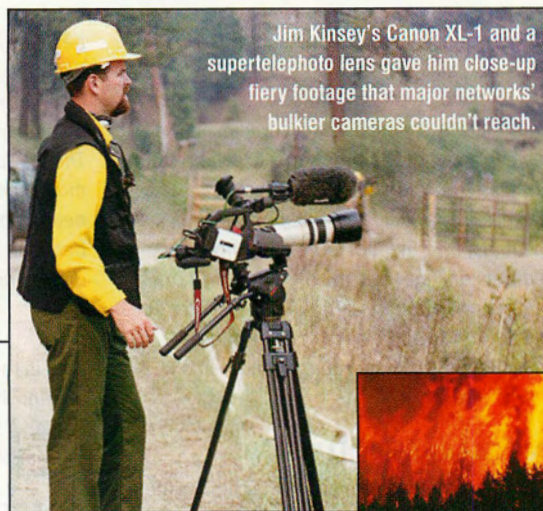
MiniDV has become the de facto standard for digital consumer camcorders. Some miniDV cameras—such as Canon's XL1 and GL1, and Sony's VX-1000—are high enough quality for some television broadcasts. Priced at

\$2,000 to \$4,000, these cameras aren't as cheap as consumer miniDV camcorders, but considering broadcast cameras can run upwards of \$20,000, they are a steal. Plus, they're a lot lighter, and don't require a three-person camera crew, making them less intimidating for interview subjects.

Fiery Flexibility

In August 2000, miniDV cameras were integral in broadcasting the headline news when wildfires burned, uncontrolled, across the western United States. At least six major U.S. television networks sent crews to Bitterroot Valley, Montana, but their bulky broadcast cameras prevented them from getting too close to the action. Luckily, Jim Kinsey and his lightweight miniDV cameras were on the scene to capture on tape some of the most dramatic fire footage seen on TV that summer.

A documentary filmmaker with firefighting experience, Kinsey grabbed his Canon XL-1, Canon GL-1, and some high-powered lenses, then marched up to the front lines and filmed for as long as he could stand the heat. His supertelephoto lens (1 to 400mm) recorded close-ups of the fires from about a half-mile away. By the end of the summer, NBC, CBS, ABC, CNN, and the BBC were among the news networks that broadcast Kinsey's footage via satellite.



Jim Kinsey's Canon XL-1 and a supertelephoto lens gave him close-up fiery footage that major networks' bulkier cameras couldn't reach.

PHOTOGRAPHY COURTESY OF JIM KINSEY

PHOTOGRAPHY COURTESY OF CANON

The People's Camera

In Wichita Kansas, reporter Larry Hattberg uses a Canon XL-1 to shoot the Emmy-award-winning TV series, *Hatteberg's People*, for ABC-affiliate KAKE-TV. "[The XL-1 is] light, it's small, and it permits me to move quickly and still get very high-quality images," Hattberg says.

Still, miniDV isn't optimal for most television broadcasts, which still require professional, higher-resolution formats like Sony's DVCam and Panasonic's DVC-Pro. (See "DV Demystified," below). MiniDV audio quality is not ideal, says Hattberg, explaining that adjusting the audio on one channel often accidentally affects the audio on the second channel.

But newsrooms are beginning to recognize the quality and mobility of miniDV. If you find yourself with an extra five grand and a disaster-in-progress, your footage could find itself on the nightly news.—NR

DV Demystified

Are you looking to buy a digital camcorder but confused by all the formats? Here's the lowdown on what you'll encounter.

Hi8 This is an 8mm *analog* (not digital) format that you can't directly import into your Mac without an analog-to-digital converter. Two years ago, Hi8 was what DV is today. Some studios still use it for *Blair Witch*-style projects.

Digital8 Digital8 camcorders can record digital signals onto analog Hi8 tapes, so you can import your footage to your Mac via FireWire. Digital8 footage is sharper than Hi8 footage, but you only get half the recording time since Digital8 camcorders run through tape twice as fast as analog camcorders.

MiniDV Created by Sony, miniDV is the standard among consumer digital FireWire camcorders. MiniDV tapes use a 6mm

metal evaporate tape that works across a broad range of camcorder brands.

DVCam This is Sony's professional (expensive) digital video format. At 6mm wide, the tape is the same size as a miniDV tape, and it will fit into your consumer miniDV camera. The composition of the tape is entirely different, however. DVCam tapes have a DLC coating that makes the recording quality higher than that of a miniDV tape.

DVC-Pro This is Panasonic's professional digital video format. It is physically a different size than the Sony miniDV, DV, and DVCam tapes. The tape's different, too—it's metal particle.

APPLE VS. DELL

the copycat conundrum



Who copied whom?

If imitation is the sincerest form of flattery, then Apple CEO Steve Jobs should be tickled a rosy shade of red at the copycat moves of Dell CEO Michael Dell. Don't believe us? Jack Miller of the news site *As the Apple Turns* (www.appleturns.com) gives us a blow-by-blow breakdown of just how closely Dell Computer has followed Apple's lead over the past few years. Coincidence? Maybe...but if we were Steve Jobs, we'd hide our answers during the next business strategy quiz.

Browser Wars Are Brewing

More Companies Compete for Your Attention

Now here's a war to get behind. Mac OS X brings several new players to the dying Web browser market, a competitive move that means more options for Mac users.—Whitney Hess

Netscape 6.1

(www.netscape.com)

Mac OS 8.6 or later, Mac OS X preview release available

Netscape 6.1 shows major improvements over the buggy 6.0 release: It offers a faster launch, enhanced form and bookmark managers, and better integration with apps like AIM and RealPlayer 8. The browser provides added privacy and security with its Cookie Manager and Cookie Alerts, and it easily manages multiple email accounts.



It's My Sidebar, and I'll stash what I want to.

Internet Explorer 5.1 Mac Preview Release

(www.microsoft.com/mac)

Mac OS 8 or later, Mac OS 10.0.3 required for Mac OS X preview release

Microsoft's Internet Explorer 5.1 Mac Preview Release for Mac OS X looks like the Classic version. It has an expanded Window menu (including a feature for toggling between windows), and you can replace the toolbar button icons with artwork of your own. The browser's Tasman rendering engine takes advantage of the latest Web standards while maintaining backward compatibility for existing Internet content.



Internet Explorer keeps the same trusty interface.

Omniweb 4.0.3

(www.omnigroup.com)

Mac OS X only

Omnigroup's updated Omniweb browser has autofill forms and the ability to drag pages directly to your bookmarks list. Its fully Aquafied user interface showcases window drawers and a customizable toolbar—plus, some buttons even throb. If you're multilingual, Omniweb has language support for English, Danish, French, German, Japanese, and Swedish.



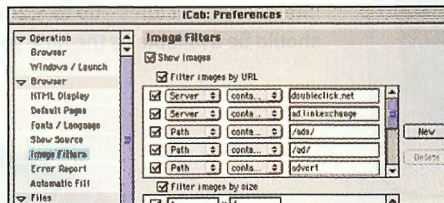
Express yourself with your own custom toolbar.

iCab Preview 2.5.3

(www.icab.de)

System 7.5 or later, Mac OS X preview available

iCab Preview has a keyboard shortcut for opening links in a new window and a Link Manager for isolating all of the links on a Web page. This browser also blocks unwanted advertising pop-up windows. For easier cross-platform and offline access to graphics-laden pages, you can archive HTML pages as Zip files. Best of all, iCab doesn't require or change any of your system extensions.



iCab's ability to turn off advertising is worth its weight in click-through.

Opera 5 for Mac (beta)

(www.opera.com)

System 7.5.3 or later, early Mac OS X beta available

The second beta release from Opera Software gives us better window management, a supercharged search function, faster loading speeds, and greater security with Transport Layer Security 1.0. Still, this browser doesn't offer a print function or a customizable toolbar. While the Mac OS X version (a trim 2MB download) includes a slew of keyboard shortcuts and a high-quality zoom (up to 1,000 percent), the beta is still fragile.



Holy multiple-window management!

newsNOOK

Apple Wants Your ID

When Apple discontinued the Tech Info Library, affectionately known as the TIL, the company replaced it with the AppleCare Knowledge Base support center, which (gasp) requires an Apple ID. To create an ID, you must divulge your name and address. In all fairness, Apple has a robust privacy policy, so you're at no risk of receiving unwanted spam.

Worker Bee Settles

Apple announced a settlement with the "Worker Bee," aka temporary Apple employee Juan Gutierrez. He allegedly leaked rumors of the optical mouse and the multiprocessor G4s before Apple officially announced them in July 2000.

Macs for MOMA

The *New York Times* reported that in August 2001 the Museum of Modern Art (MOMA) in New York City acquired the now-defunct Cube and six other Apple products for its design collection. What is it about death that makes art so valuable?

Version Explosions

While debating whether to install Mac OS 10.1, why not download Mac OS 9.2.1, which makes your Classic apps work better in Mac OS X and offers improved hardware support for Macs capable of running Mac OS X? That's a lot of version dots, but no one wants to support zero OS growth.

HP's Busy

In a summer of surprises, Hewlett-Packard announced on Labor Day a merger with Compaq that, according to HP, would create an \$87 billion technology company. We suppose HP CEO Carly Fiorina didn't take the day off. In news that's less grandiose but far more fun, HP brings us the re-recordable DVD—just in case that first iMovie isn't all you hoped it would be. It should be available in retail stores by the time you read this.

Which Consumer Desktop is Just Like the Other?

May 1998: Apple introduces the iMac: a small, consumer-targeted computer with built-in Ethernet, a 56K modem, a compact keyboard, USB-only expansion, no slots, and no built-in floppy drive. The company makes the groundbreaking move to five fruit flavors in January 1999.

November 1999: Dell introduces the WebPC: a small, consumer-targeted computer with built-in Ethernet, a 56K modem, a compact keyboard, USB-only expansion, no slots, and no built-in floppy drive. Oh, did we mention it was available in four different colors?

get info

droolWORTHY

Sexy Stuff We Can't Wait to Get Our Mitts On



Small size. Big pictures. Any questions?

Camedia D-40 Zoom

Olympus www.olympus.com \$899

My, what big pictures you take! At 3.4 inches wide and 2.7 inches high, this tiny digital camera is slightly larger than Canon's Elph, but packs a 4-megapixel punch. This camera combines a 2.8X optical zoom and a 2.5X digital zoom with preset photo modes and full manual capabilities. Plus, its optimum image-enlargement mode lets you take even larger (though interpolated) pictures—up to 3,200 by 2,400 pixels. The Camedia D-40 Zoom should be available by the time you read this.—NR

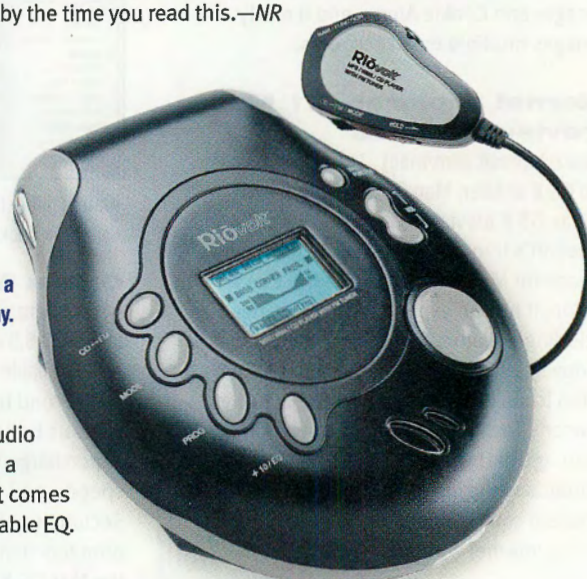
PHOTOGRAPH COURTESY OF OLYMPUS

RioVolt SP250

Sonicblue www.sonicblue.com \$179.95

What looks like a clam, opens like a clam, has an FM radio, and plays audio CDs and MP3s burned onto CD? It's the RioVolt SP250, which also has a navigable, backlit LCD display for selecting tracks from user-defined folders. It comes with headphones, remote control, rechargeable batteries (finally), and adjustable EQ. RioVolt SP250 should be available by the time you read this.—NR

The Walkman's come a long, long way.



PHOTOGRAPH COURTESY OF SONICBLUE

Shareware Pick of the Month

Snapz Pro X

PRICE: \$29 or \$49 with QuickTime option URL: www.ambrosiasw.com

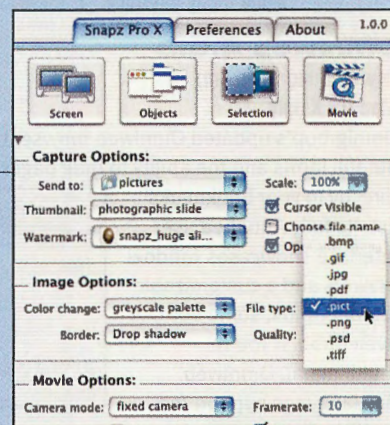


Find Snapz Pro X on The Disc.



For users dissatisfied with Mac OS X's screen-capture feature, Ambrosia Software's Snapz Pro X is the mother lode of screen grabbers. Completely rebuilt for the new OS, Snapz Pro X lets you save images in BMP, PICT, GIF, JPEG, PNG, TIFF, PDF, and Photoshop formats. Make thumbnails, add watermarks, and use the new Objects button to take a screenshot by simply clicking a window or menu. Pay an extra \$20, and you can even capture a QuickTime movie. Yes, it's our unbiased, unsolicited opinion that Snapz Pro X is among the best shareware apps around—or our name isn't *MacAddict*.—NR

It's alive! It's alive! Snapz Pro X grabbed this QuickTime movie.



New features and a gooey Aqua interface make a near-art of screen grabbing.

APPLE VS. DELL

the copycat conundrum

The Case of the Copied Case

January 1999: Apple introduces the blue-and-white Power Mac G3, sporting an easy-to-open, unfolding case. In September 1999, the same case goes Graphite to house the original Power Mac G4.

September 2000: Dell ships the OptiPlex GX 150—a desktop Pentium III-based PC with a daring new color scheme (hey, gray is more daring than beige, right?) and a case that just happens to open like a suitcase, sans tools. Suspicious, isn't it?

The In Crowd

USB Audio Interfaces Fill the Audio-in Void on Newer Macs

Since Macs no longer ship with audio-in ports, musicians are turning to USB audio-interface boxes to record their tunes, voices, and instruments. USB's data-transfer rate isn't high enough to record at the 96KHz sampling rate some professionals desire for high-quality audio, and you can't record more than four simultaneous tracks (for that you would need Mark of the Unicorn's 828 FireWire Audio Interface, www.motu.com). Still, these USB devices are robust enough for the serious hobbyist, and their portability works for artists on the road. Here's a sampling of what's out there.—NR

Roland ED UA-3

Edirol/Roland, www.edirol.com, \$179

Mac OS 9.04 or later

Mic and guitar input, two audio-in channels, two audio-out channels, S/PDIF digital I/O, 44.1/48KHz sampling rate, 20-bit recording. Roland is also releasing the ED UA-5, which features 24-bit 96KHz recording, and a higher-end microphone for \$375.



Roland's product lineup also includes two \$100 audio interfaces.

Tascam US-428 USB Interface Controller

Tascam/Teac, www.tascam.com, \$625

Mac OS 8.6 or later

Four audio-in channels, two audio-out channels, S/PDIF digital I/O, 44.1/48KHz sampling rate, 24-bit recording

This pumped-up device is more like a mixer. It features eight faders, an EQ module, 32 channels of MIDI I/O, and comes bundled with Bias DeckLE audio.



This audio interface comes with all the fixin's.

Aardvark Direct Mix USB3

Aardvark, www.aardvark-pro.com, \$299

Mac OS 9.04 and later

Mic and guitar input, two audio-in channels, two audio-out channels, 44.1/48KHz sampling rate, 24-bit recording

This one's bundled with Cakewalk Metro SE and should be available by the time you read this.



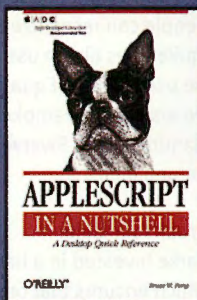
Light, compact, and silver—this device doesn't have S/PDIF digital I/O.

BOOKreview AppleScript in a Nutshell

by Bruce W. Perry, O'Reilly & Associates, \$29.95

AppleScript in a Nutshell is the first new AppleScript title we've seen in a long time. The book is aimed at Mac users with programming experience (not necessarily AppleScript experience). If that's you, the topics like Apple Data Detectors and running scripts from within the Mac OS X Terminal will be invaluable. However, if you're just discovering AppleScript and have little or no programming experience, we recommend starting out with Danny Goodman's *AppleScript Handbook*.—IS

This book will be rough for beginners.



Double the Color. Double the Fun.

January 1999: On the color front, Apple fully embraces a brave new world of computer visual design by banishing beige from its entire product line. The Power Mac G3 goes Blueberry at Macworld Expo San Francisco, and the crowds cheer.

September 2000: More than a year and a half after Apple's announcement, Dell boldly states that it, too, will officially retire good ol' beige as a product color—but not until August of 2001. (Now *that's* a long goodbye.)

newSTUFF

Read Your Mail from Timbuktu

(Netopia, www.netopia.com, \$179.95)

Netopia has released Timbuktu Pro, the popular file-transfer and remote-access software, for Mac OS X. This new version offers package distribution, extra security, large-file support, and of course an Aqua interface.

The 2.0 Hubbub

(IOGear, www.iogear.com, \$59)

IOGear has released the first USB 2.0 hub for the Mac. It has four ports and works only with Mac OS X. Although IOGear promises transfer rates up to 40 times faster than your current USB connection's, you may find it hard to actually use the hub—USB 2.0 peripherals for the Mac are still few and far between.

The USB 2.0 hub is here. The peripherals (for the most part) are not.



Say Sony!

(Sony, www.sony.com)

Sony announced a slew of new photo products, starting with the DPP-MP1 digital photo printer, a palm-size USB printer weighing less than a pound and costing \$280. Look for three new Cybershot cameras as well. The 3.34-megapixel DSC-P5 (3X optical, 6X digital zoom) and DSC-P3 (3X digital zoom) cost \$600 and \$500 respectively, and the brand-spanking-new 5.24-megapixel DSC-F707 goes for about \$1,000.

It's Monsoon Season

(Sonigistix, www.sonigistix.com, \$179)

Sonigistix announced the six-piece Monsoon MH-505 Flat Panel Surround System. This speaker and subwoofer setup supports 5.1 Surround Sound and is also backward compatible with four-channel sound cards.

Formac Turns 22

(Formac, www.formac.com, \$849)

With the ProNitron 22/800, Formac announced its first 22-inch CRT display available in the United States. This monitor has a maximum resolution of 2,048 by 1,536 pixels at 75Hz, a 24mm aperture grill, a 160mHz refresh rate, and a built-in, self-powered USB hub.

At 22 inches, bigger is badder, in that good way.



INtheSTUDIO with Steven Parke

Steven Parke Talks About Rock-Star Art



Adobe Photoshop is a band's best friend. Just ask illustrator and photographer Steven Parke. Since 1988, Parke has designed T-shirts and album art and has shot photography for "the artist once again known as Prince." Parke talked to us about designing the graphics for *Heaven*, the new album from former dance diva (and Prince band member) Sheila E. In the process, he divulged a few of his secrets for creating awesome CD artwork.—NR

Bright light! Bright light! Parke (right) used Photoshop Layers to create a soft, heavenly effect for Sheila E.'s *Heaven* album (left).



PHOTOGRAPHY COURTESY OF STEVEN PARKE

Start with a Concept

Pick a concept and use it throughout the CD sleeve and booklet design. On *Heaven*, Parke chose a "heavenly" look, which consisted of bright light, a soft haze, and Sheila E.'s face (you do have to sell the record). Sheila E.'s red hair proved challenging. "You're dealing with her skin tone, a lot of white, and then her hair," Parke says. His solution for incorporating all the different colors was to use the red of the hair as a recurring element throughout the CD booklet.

Retouch Photos

Use Photoshop to retouch band photos. Photoshop can remove shadows from a person's face or add shadows back in to enhance cheekbones. Be careful not to go too far—it's easy to remove lines to the point where your subjects start looking artificial.

Use Photoshop's Layers and Opacity

When retouching photos, keep the original image in one Photoshop layer and make your changes in separate, additional layers with 100 percent opacity. If your edits are too pronounced (for example, if you've added too much shadow to someone's cheekbones),

you can screen back the layer to 60 or 70 percent opacity to create a subtler effect.

Use Multiple Layers

On the *Heaven* CD cover, Parke used a base layer (the original photograph) plus five other layers. He knocked one layer back to white so he could edit out flyaway hair in Sheila E.'s portrait. Since the background was white, he used varying pen pressures to clean up stray hairs without creating a cutout look. He placed a second opaque layer over the first for basic retouching, hiding traces of sleep deprivation, and smoothing out facial lines. Parke used a third, multiply layer for adding depth to the shadows and contours of the face. In the fourth layer, he copied the entire photograph, lightened it, placed it on top of the original, and blended the layers to give the image a more blown-out appearance. In the fifth layer, he added clouds and painted little puffs of smoke.

Don't Rely on Photoshop Filters

"Filters have their place," Parke says, "but you don't want to use them so much that people can recognize them." That said, Parke does like to use a few third-party filters. He uses KPT 6's Equalizer to sharpen photos. He also ran the photo he painted through Flaming Pear's Swerve to give it a more natural feel.

Proof Your Color

Parke invested in a hardware color calibrator, which ensures that onscreen color tweaks are what actually print.

Parke's Studio

Hardware Favorites

- Apple Power Mac G4/450, Mac OS 9.1, 768MB of RAM, 25GB of internal hard disk space (www.apple.com)
- Maxtor 40GB FireWire external drive (\$239.99, www.maxtor.com)
- APS Tech 9GB Ultra SCSI Hard Drive (\$199.95, www.apstech.com)
- Plextor PlexWriter 8/20 SCSI CD-R drive (discontinued, www.plextor.com)
- Matshita/Panasonic DVD-RAM drive (\$429.99, www.panasonic.com)
- Epson Stylus Color 1520 (\$499.99, www.epson.com)
- Hitachi/RasterOps Clearvue Color 21 (\$499, www.hitachi.com)
- ViewSonic ViewPanel 15-inch LCD Flat Panel (\$479.99, www.viewsonic.com)
- ATI Technologies XClaim VR Pro (discontinued, www.ati.com)
- Umax PowerLook III with transparency adapter (\$699, www.umax.com)
- Wacom Technology Intuos 6 by 8 graphics tablet (\$299, www.wacom.com)
- Kodak DCS460 (discontinued, www.kodak.com)
- Wallstreet G3 PowerBook/266 with USB PC Card

Software Favorites

- Umax PowerColor software (bundled with scanner)
- Adobe Photoshop 6.1 (\$609, www.adobe.com)
- Quark QuarkXPress 4.1 (\$849.99, www.quark.com)
- Corel KPT 6 (\$149, www.corel.com)
- Painter 6 (Painter 7 is now available, www.procreate.com)
- Flaming Pear Designer Sextet (\$49, www.flamingpear.com)



**APPLE
VS. DELL**
the copycat conundrum

I See Two iBooks

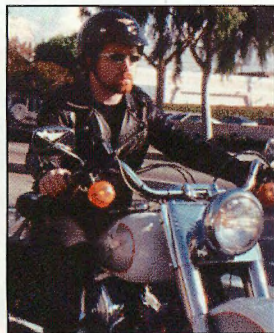
July 1999: At Macworld Expo New York, Apple introduces the original iBook, a low-cost, consumer-oriented laptop available in two fun colors: Blueberry and Tangerine.

September 1999: Struggling to catch up, Dell unveils the Inspiron 3700, a low-cost, consumer-oriented laptop available in two slightly less-fun hues: Storm Grey and Tahoe Blue. (Otherwise known as Drab and Less Drab.)

X-It Interviews

Developers Discuss their Mac OS X Apps

It's been a few years since Corel revamped the Mac version of its notoriously PC-centric drawing application, CorelDraw. With a brand-new CorelDraw 10 Graphics Suite for Macintosh due out soon (yes, the company skipped version 9), the program is not only back for Mac, but it is back in Aqua.—NR



When Fortin's not managing CorelDraw's port to Mac OS X, he rides like the wind.

Rick Fortin

Program manager for CorelDraw 10 for Macintosh

Mac OS X product: CorelDraw 10
Available this fall

MA: How was it developing CorelDraw for Mac OS 10.1?

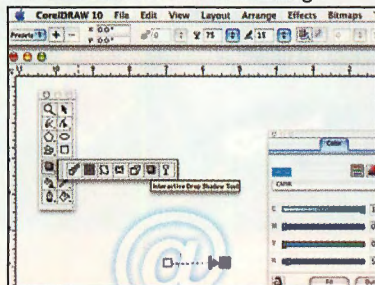
RF: When we got the initial release of Puma, we had a lot of large issues that scared us—things like the Dock. We had to make our applications move side to side to move out of the way of the Dock, which can be positioned anywhere now. Apple sent us a new seed [update to 10.1], and a lot of those issues went away.

MA: Does Mac OS X's PDF-based output change the way you design CorelDraw for 10?

RF: No. We have our own PDF engine built into Draw, which provides a feature set for people who want complete control over PDF creation. We allow users to embed or subset fonts, downsample images, maintain hyperlinks, or even add printer's marks to their documents. Gradient-mesh fills, soft masks, and transparencies are also maintained, allowing people to roundtrip PDF files in our applications. Although our PDF engine was tailor-made for us, we follow Adobe's spec, and we don't stray from it at all. That's important for our users. The main reason we didn't tie into Quartz is because we're cross platform.

MA: A Cocoa graphic application, like Stone Design's Create, can be very object oriented. You can change the graphic's properties by simply dragging the option out of a menu and onto the object. Is that at all relevant to CorelDraw?

RF: Create is an interesting application that takes advantage of some OS X technologies that the larger graphics programs won't, because [the larger companies] have developed their own engines to be cross platform. I haven't had a chance to do a thorough evaluation of Create, but I didn't see anything Create can do that CorelDraw wouldn't be able to do.



No longer a PC-centric product, CorelDraw's got a new, refined Mac look.

The Unofficial Apple Store Locator

Like highly fertile rabbits, Apple stores are multiplying fast all around the United States. While Apple has officially announced only a handful of locations, we learned of about 20 other store openings by talking to mall management offices and reading Apple's very own job site (www.apple.com/jobs). Here's your guide to finding the Apple Store nearest you. As of press time, many of these stores (and the malls that house them) are still under construction. Locations marked in green should be open by the time you read this.—NR



- | | | |
|---|---|--|
| 1 Chandler Fashion Center
Chandler, AZ | 11 The Falls Shopping Center
Miami, FL | 20 Crossgates Mall
Albany, NY |
| 2 Biltmore Fashion Park
Phoenix, AZ | 12 International Plaza
Tampa, FL | 21 Walden Galleria
Buffalo, NY |
| 3 South Coast Plaza
Costa Mesa, CA | 13 The Mall at Wellington Green
Wellington, FL | 22 Prince Street (in SoHo)
New York, NY |
| 4 Glendale Galleria
Glendale, CA | 14 679 N. Michigan Ave.
Chicago, IL | 23 Kenwood Towne Centre
Cincinnati, OH |
| 5 Fashion Island
Newport Beach, CA | 15 Woodfield Shopping Center
Schaumburg, IL | 24 Easton Town Center
Columbus, OH |
| 6 Northridge Fashion Center
Northridge, CA | 16 CambridgeSide Galleria
Cambridge, MA | 25 Germantown
Memphis, TN |
| 7 451 University Avenue
Palo Alto, CA | 17 Northshore Mall
Peabody, MA | 26 Willow Bend
Plano, TX |
| 8 Fashion Valley
San Diego, CA | 18 Mall of America
Bloomington, MN | 27 Market Common
Clarendon, VA |
| 9 Aspen Grove
Littleton, CO | 19 Tice's Mall
Woodcliff Lake, NJ | 28 Tysons Corner Center
McLean, VA |
| 10 Westfarms Mall
West Hartford, CT | | |

Twice Wireless

July 1999: When showing off the iBook at Macworld Expo New York, Steve Jobs also takes the wraps off of AirPort, an affordable and simple wireless networking system. Did we mention that the iBook was the first laptop with integrated antennas?

September 1999: Michael Dell bundles an AiroNet PC card with Dell's business laptops. It's clunky and costs four times as much as AirPort, but in the July/August 2001 issue of *Technology Review*, Mike Dell states, "We were the first to integrate wireless into notebooks, with integrated antennas." Hey, who's copying whom, here?

scrapbook

Share the wealth.

The Gnu, Gnu Thing

By T. Neil Sroka

With Napster reduced to a recording-industry pawn, Mac users are turning to The Gnutella Network, a peer-to-peer file sharing system that lets Mac, PC, Linux, and Unix users share music, movies,

and more. Gnutella is an entirely different beast from Napster. While Napster uses a central server for file searching and sharing, Gnutella is an informal network of individual users. Here's how it works.

In Search of...

To search for a file, you send your request out to the servents (see "Faithful Servents," below) on your horizon, which forward that request to servents on their horizons. Be patient. This search method sucks up a lot of bandwidth since each servent might be asked the same question multiple times. Specifying a file type will often yield better results. When searching for music, remember that Gnutella can search by filename only and not by artist, track number, or album title.

Your Horizon

Only a small portion of the Gnutella universe, your horizon is the number of other Gnutella users (10,000 maximum) you can talk to. You build a horizon by logging onto Gnutella and connecting your servent (see "Faithful Servents," below) to the servents of other Gnutella users. These servents tell other servents that you exist, and so on. Some servents, like LimeWire, automatically route you to other servents via an IP address or URL.

Push Requests

If the servent supplying the file you want is behind a firewall, your servent will issue a push request. Unlike a pull request, a push request asks the supplying servent to connect to you in order to initiate the file transfer. However, push requests will not work if both the sender and the receiver are behind firewalls, because neither party can initiate a direct transfer.

Pull Requests

It takes time for search results (containing a file's name, size, and IP location) to filter back through your horizon. After you select one of the results to download, your servent will issue a pull request to the servent holding the file. Basically demanding that the other user give you the file, a pull request directly connects both sending and receiving servents and transfers the file via the http protocol.

Gnutella Etiquette

A good Gnutell-ite gives back to the community from which it receives.

- **Do** share your files.
- **Don't** cancel uploads.
- **Don't** sign off when you're done downloading files.

Hacker Attacks

The Gnutella network tells hackers two things they really want to know: that your Mac exists and the IP address at which it exists. With this information, hackers can scan your computer for open ports to which they can connect. If you're running an older Mac or Mac OS X, it's possible (in theory) to inadvertently download a file that turns your Mac into a Zombie. In Distributed Denial of Service (DDoS) attacks, hackers force Zombies to send large amounts of traffic to a target server, which then crashes.

Faithful Servents

A servent is the application that connects you to the Gnutella Network. No, we didn't misspell the word. It represents the app's dual role as "server" and "client." LimeWire (www.limewire.com) is one easy-to-use, Java-based servent, and Phex (<http://homepage.mac.com/macxster/#macphex>) runs only on Mac OS X. The MacTella servent (www.cxc.com) runs exclusively on the Mac.

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HANDED.



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“
I have a condo on the beach and a great job editing video downtown.
But I was seeing a lot more skyline than shoreline. Then I heard about
the new Peerless™ portable drive. It's like having infinite storage.
And, with its 15MB/sec FireWire® transfer rate and 20GB disk, I can take
my massive video files home. So, I never miss a deadline, or a sunset.”



Download free software at
iomega.com to see what
Peerless™ can do for you.

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Go Mobile!

Freedom. Power. Unlimited access to the Web and beyond.
Here's all the latest gear and expert tips you need to go mobile.

Why chain yourself to a desk when you can go anywhere, anytime, with your Mac? In today's brave new world of mobile computing, you don't have to shun the daylight to feed your Mac addiction. With the right equipment and some careful planning (it helps to have a load of cash as well), you'll be ready to hit the road.

If you don't own a laptop, there's never been a better time to buy one. In the early days of computing—say, five years ago—the processors inside laptop computers trailed their desktop siblings by at least one generation while costing extravagantly more. Both of those gaps are closing—and fast—with the introduction of the sophisticated Titanium PowerBook G4 (which tops out at 500MHz) and the perky iBook with its 500MHz G3 processor. At the same time, the peripherals and PDAs that go with your laptop are getting smaller and slicker every day.

So take it outside, would ya?

Inside

Lighten Up p24

Does your mobile setup weigh more than a baby elephant? Has your PowerBook battery ever quit on you just as you got on a roll with that screenplay? Here's all of the guidance you need for going mobile, including the phatest paraphernalia, tips on making your battery last, and advice for keeping your laptop secure.

Cut the Wires p28

Just as the Mac is the hub of your digital lifestyle, AirPort is the hub of your wireless network. Here you'll find step by step guidance on how to set up AirPort correctly, as well as solid advice on making your wireless network run faster than Marion Jones.

Power to the PDA p30

PDAs have become de rigueur for people who don't want to lug anything larger than a Pop-Tart. We tell you about the coolest gear for your handheld and how to go wireless with it.

by Alan Stafford

photograph by Arnold Tiosejo



Find a demo of
OSX Power
Manager 2.1 on
The Disc

Lighten Up

Oof! If it takes a dogsled team to lug around your road setup, save space and weight with this slimmed-down equipment.

Is your mobile-computing gear heavier than your luggage? Trimming the fat from your electronica makes traveling a little more fun and a lot less painful. We're going to assume you already have the most

important piece—your laptop. But the peripherals that go with your laptop are also important. Here we put a slew of gear to the test to find out which products you really should leave at home.

Slim CD-RWs

You have two choices when it comes to portable CD-RW drives—fast (aka FireWire) or slow (aka USB). Unfortunately, with teeny CD-RWs, what you gain in portability, you tend to lose in reliability.

Imation's CD Burn-R (\$159.95, www.imation.com) connects via USB—hence its poky 4X write/4X rewrite/6X read speed. That said, its write times for CD-R and CD-RW are fine for most tasks, and if you need faster CD-ROM read times, you can just use the drive in your laptop. For true portability—and wallet shock—**Sony's Digital Relay** (\$399, www.sel.sony.com) provides a 4X/4X/6X USB CD-RW mechanism that runs on a battery, though we found it had trouble handling multisession audio burns. The bonus is that it plays audio and MP3 CDs for three-in-one functionality (see *Reviews*, Jul/01, p61).

For those obsessed with speed and size, **LaCie's Pocket CD-RW** (\$399.95, www.lacie.com), though fairly expensive, can connect via FireWire or USB, and if you use FireWire, the drive doesn't require external power. A silicone encasement protects the 8X/4X/24X drive from shocks, although we had trouble getting this drive to handle multisession burning (see *Reviews*, Aug/01, p41). Another option is **Iomega's Predator CD-RW** (\$269.95 for 8X/4X/32X FireWire version, \$219.95 for 4X/4X/6X USB version, www.iomega.com). Unfortunately, in our tests, it burned reliably only at 4X speeds, even with a FireWire connection (see *Reviews*, Oct/01, p59).



Imation CD Burn-R, \$159.95

Sony Digital Relay, \$399



LaCie Pocket CD-RW, \$399.95

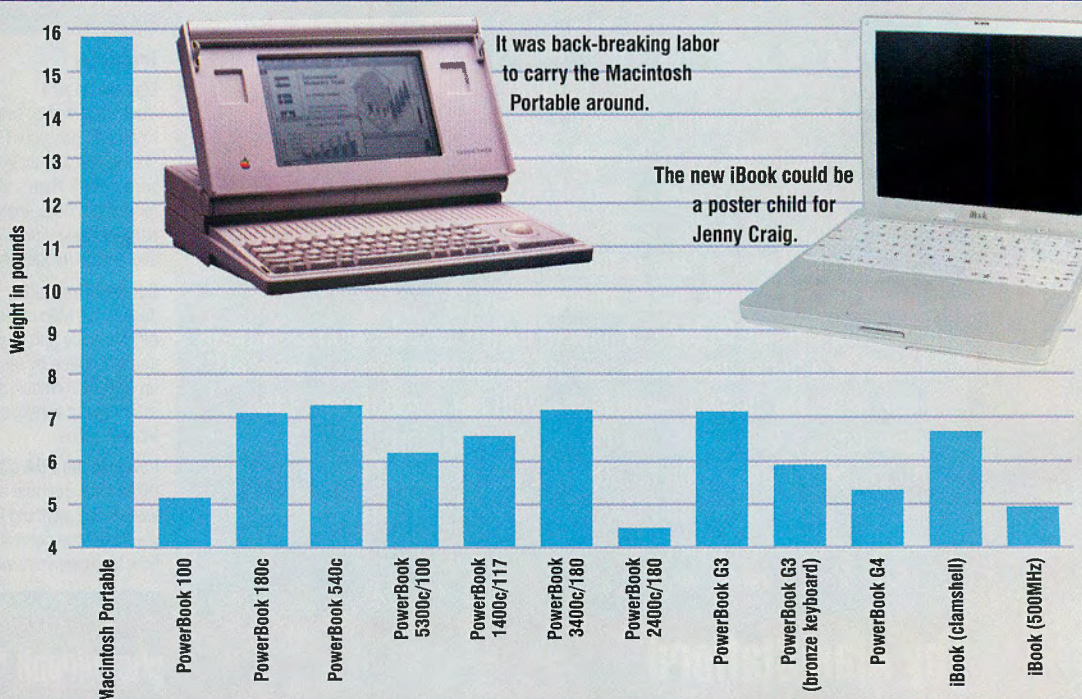
Iomega Predator CD-RW, \$269.95



The Oprah Diet

The latest Apple portables—the G4 PowerBook Titanium and the all-white iBook—are both quite trim, weighing in at 5.3 and 4.9 pounds, respectively. But in the past, Apple's portables have had a tough time keeping their weight steady. Here's a look at the portable line's struggle with the scale.

The Titanium PowerBook G4 is slim, but not unhealthy-looking.



Carry It in Style

OK, we know: PowerBook carrying cases are all about looks. But at the very least, try to buy a well-padded bag to protect the PowerBook's screen, which rates as the most frequently repaired—and most expensive to repair—item on a 'Book. Here are some good choices:

Zero Halliburton Z3 (\$170 ESP, www.zerohalliburton.com). You may look like a drug dealer or a diamond courier, but the aluminum exterior and padded interior will keep your PowerBook or iBook protected. One problem: The Z3 weighs about 4.5 pounds. Ouch.

This armorlike case should offer enough protection for your PowerBook—unless you plan on dropping it from ten stories up.



Waterfield Designs SleeveCase (\$35 to \$42, add \$45 for leather; www.sfbags.com). To protect your portable without making a big deal out of it, consider the SleeveCase, a sandwich of ballistic nylon surrounding a neoprene wrapper.

The understated SleeveCase doesn't scream "Expensive laptop in here!"

Kensington AstroPack (\$50, www.kensington.com). It's not the most attractive bag on the boulevard, but the AstroPack is very functional, with a floating compartment for your iBook and cubbyholes for all your crap.

Function over form—never a bad thing.



Timbuktu Designs Commuter Computer Bag (\$95 to \$208 depending on options, www.timbuk2.com). You can't swing a cat in San Francisco without hitting a dot-com refugee, many of whom keep their worthless stock options and disconnected cell phones in Timbuktu bags. You can build your own bag with TB2's online configurator, one of the best Web-based shopping tools we've seen.

Tom Bihn G4 Monolith (\$40, www.tombihn.com). This well-padded sleeve for the Titanium G4 uses a handle rather than a shoulder strap. You can carry the G4 lengthwise or slip it easily inside a backpack.

This no-frills carrying case should protect your precious TiBook.



It's what all the yuppies are carrying.



Mini Mouse

Mice really don't take up an inordinate amount of space, but sometimes every millimeter counts. **Kensington's PocketMouse** (\$29.99, www.kensington.com) and **Port's Optical Combo Screen Scroller Mobile Mini Mouse** (\$49.99, www.port.com) are about the same size and weight, and both connect via USB. We liked the less-expensive Kensington better: It's made of higher-quality plastic, uses a larger scroll wheel, and comes with a cute little storage bag.

Kensington PocketMouse, \$29.99



Port Optical Combo Screen Scroller Mobile Mini Mouse, \$49.99

Swanky Speakers

Laptop speakers don't usually produce impressive sound quality, especially if you're listening to CDs or editing video; **Sony's SRS-T77 speakers** (\$90) aren't concert-hall quality, but sound much better than your PowerBook speakers. The 2-watt-per-channel SRS-T77s fold into a 12-ounce carrying case the size of a VHS tape.

Sony SRS-T77 speakers, \$90



Nifty Night Light

Kensington's FlyLight (\$19.99) is a USB-powered light stuck on the end of a flexible wand. It's useful in dark rooms or on red-eye flights, though we'd like it better if we could adjust its intensity and focus. The FlyLight emits a bright light that's a bit too narrow, though it's fantastic for signaling the flight attendants for more drinkies.

Kensington FlyLight, \$19.99



Handy Hubs

When it comes to compact USB hubs, choose one based on what kind of devices you use when you travel. For example, **IOGear's MiniHub Lite** (\$39.99, www.iogear.com) is a tiny two-port hub, but you can only use it with devices that don't pull much power from the USB bus, such as a mouse. A better alternative is **Targus's USB Mobile Mini Hub** (\$49.99, www.targus.com), which provides four 500-milliamp ports, is only a little larger than the IOGear model, and stores its USB cable beneath a panel on the hub. If your devices pull power through the USB bus, though, you'll have to carry the device's included AC adapter, which adds weight. You can't have everything, can you?

Targus USB Mobile Mini Hub, \$49.99



IOGear MiniHub Lite, \$39.99



Foregone Floppy Drives

Steve-o-rino may think floppies are relics, but they're useful for business travelers who need to exchange small files with PC-using clients. **Imation's USB Floppy Drive** (\$70) comes in a sturdy case you can customize with iMac-complementing color pieces (though personally, we're kinda over this color-coordination fad). The drive doesn't require a power adapter or a driver (if you have Mac OS 9 or OS X), so you just plug it in and the floppy shows up on your desktop. Mac OS 8.6 requires the included driver. **SmartDisk's VST Titanium USB Floppy Disk Drive** (\$79.95, www.smartdisk.com) works similarly, and it matches the PowerBook G4 better.



Imation USB Floppy Drive, \$70



SmartDisk VST Titanium USB Floppy Disk Drive, \$79.95

Micro Memory Card Readers

Microtech's Zio memory-card readers are about the size of a Saltine cracker (though they taste even blander) and plug into a USB port without a cable (\$29.99 for Compact Flash reader, www.microtechint.com). We tried the CompactFlash version, which worked well, though it required that we install a driver (many storage devices will mount automatically in Mac OS 9). You can get Zio readers for SmartMedia and MultiMedia Card, too.



Microtech Zio, \$29.99

Radical Remote Control

Play. Stop. Fast forward. Get me a beer. **Keyspan's Digital Media Remote** (\$49, www.keyspace.com) works well for controlling your laptop when you hook it up to a television to play DVD movies (but performs poorly when you're issuing commands to your spouse). A remote control sends signals to an infrared receiver module that connects to your iBook via USB. There's even an OS X driver for this device, and luckily OS 10.1 should support DVD playback. Thanks, Apple.



Keyspan Digital Media Remote, \$49

Petite Portable Storage

Sonnet's Piccolo (not available as of press time) gives you anywhere from 32MB to 256MB of flash-memory storage in a device so small you can attach it to your keychain (\$99 to \$599 depending on the amount of storage, www.sonnettech.com). Stick the Piccolo in your USB port and the storage space should mount without software on any Mac running OS 9 (or OS 8.6 if USB Mass Storage Support is installed; download from www.info.apple.com/support/downloads.html). The Piccolo will also work with PCs running modern Windows OS versions, though we won't argue with you if you contend there's no such thing.



Piccolo, \$99 to \$599

Security! Stop That Man!

"Steal this iBook." No, we're not alluding to **Abbie Hoffman's** guide to life; we're talking about the invisible label affixed to your Mac laptop. Fortunately, you can take steps to fight mobile malfeasance.

1. Know the Scams

Watch out for scams, such as the one where two perpetrators get in front of you while you go through the metal detectors at the airport. The second perp is carrying more hardware than Nash Bridges, thereby delaying your passage. The first perp makes off with your laptop while you're still stuck behind the second thief. Moral of the story: Don't put your gear on the belt until it's your turn to go through. It may be an urban myth, but it doesn't hurt to be careful.

2. Buy Insurance

If you plan to keep your PowerBook at home, your homeowners' or renters' policy should cover you for either theft or damage. However, if you carry your PowerBook around (um, it is a mobile-computing device), either you or your employer needs to take out a rider, or addendum, to your policy. If you don't have

homeowners' or renters' insurance, you can purchase coverage from Safeware (www.safeware.com); it costs \$180 per year for up to \$3,000 of coverage with a zero deductible.

3. Hire Some Hardware

Devices such as Kensington's SonicLock (\$39.99) and Targus's Defcon 1 (\$49.99) attach to your laptop bag; press a button or two to arm them when you set your bag down, and if they sense the bag is moving, they'll emit a loud electronic alarm to alert you to a heist. Lexent's iSpy PC Radar (\$149.95, www.lexent.com) has two parts: a proximity beacon secured inside your laptop bag and a keychain remote. Using radio waves of varying signal strength, the beacon sends an alert to the remote if a thief moves the bag outside a set radius; you can then set off the alarm manually. Now go get 'em!



4. Get a Software Snitch

zTrace Technology's zTrace Gold software (www.ztrace.com) sits on your hard drive at the driver level, so even if someone steals your laptop and wipes your hard drive, the software remains on your computer. If and when the thief connects to the Internet, the software secretly sends both the IP number it's using and the phone line's caller ID information, if available. The app is currently Windows only, but the company says a Mac version (and a PDA version) should be available late this year. The software's free; monitoring costs \$49.95 per year.

5. Password-Protect It

If you're worried about data security, a utility such as Intego's DiskGuard (\$49.95, www.intego.com) will password-protect your hard drive, even if someone disables your extensions or starts up from another disk. The company says a Mac OS X version should be ready by the first quarter of next year.

Put a lock on it. The Kensington SonicLock and Targus Defcon 1 will wail if a thief makes a break for it.

Buck Up Your Battery

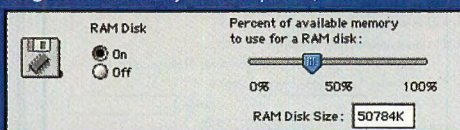
Maximizing your portable's battery life will let you get away from it all—and still take your Mac with you. These tips can help you get the most out of your power sources.

1 If you have an AirPort Wireless card, turn it off when you don't need it. It drains power.

2 Copy data—even disc images of your CD-ROMs—to your hard drive. The drive alone drains lots of power, but not nearly as much as when you tap your optical drive as well. To create a disc image of a CD-ROM, just drag the disc icon to your hard drive window.

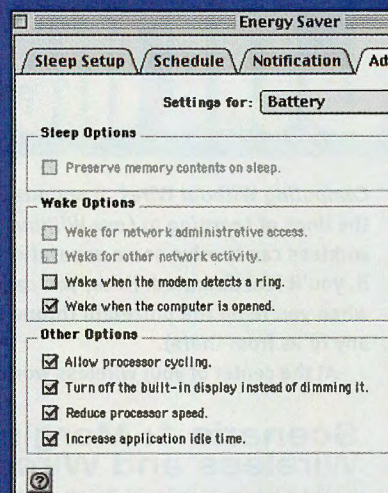
3 If you can spare the RAM, create a RAM disk and copy files to it. Open your Memory control panel, click the On button below RAM Disk, then use the slider to choose a size. Restart, then drag your work files to the resulting disk icon. Make sure to copy your files to your hard drive before you shut down, or you might lose them (although some Macs offer the Save On Shut Down setting in the Memory control panel, which will retain the data).

You can create a RAM disk in your Memory control panel.



4 If your device uses a Lilon battery, don't allow it to discharge fully. Gerry Tucker, applications engineering manager for battery manufacturer Polystor, says you'll get more charges out of your battery if you recharge it before it fully runs out.

5 Configure your device's Energy Saver control panel settings as aggressively as you can stand—for example, set the system to go to sleep after just a few minutes of inactivity. Also, check the Other Options settings under the Advanced Settings tab—and make sure to select the settings for Battery, not Power Adapter from the pop-up menu. By the way, Apple's Location Manager does not let you include Energy Saver settings in its options, but the shareware DssW Power Manager (\$30, www.dssw.co.uk/powermanager) includes a Location Manager module that does.



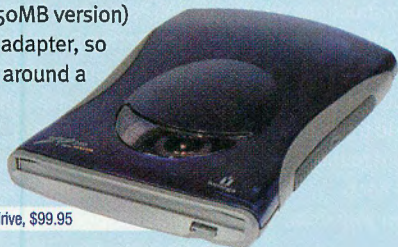
Tweak the Battery settings in the Energy Saver control panel, especially its Advanced Settings tab, to stretch your battery life.

6 If the Apple battery just isn't cutting it, try an extended-life battery like Electrofuel's PowerPad 120 (\$399.99, www.electrofuel.com), which provides 8 to 12 hours of laptop power; it has about the same dimensions as an iBook and weighs 1.9 pounds. All you need to do is plug your AC adapter into the battery to extend its life.

Zippy Zip Drive

At one point Zip was considered something of a universal storage medium. As proof, Iomega says it has shipped more than 200 million Zip disks. Now Zip drives are more portable than ever—Iomega's **USB-powered Zip drive** (\$99.95 for 100MB version, \$179.95 for 250MB version) doesn't require an AC adapter, so you only have to carry around a USB cable and driver software, just in case.

Iomega USB-powered Zip drive, \$99.95



Fancy Phone-Line Tester

When you're on the lam, you may need to figure out if the shady hotel where you're hiding out is using a digital phone system—the type that will fry your modem like turkey bacon in a microwave. **RoadWarrior's Modem Saver Plus** (\$29.99, www.roadwarrior.com) tells you if the line's carrying more voltage than is safe for your modem or if the phone line's polarity is reversed (in other words, the phone dude screwed up your telephone wiring), which could slow data transfers. We advise you to check any hotel line that isn't clearly labeled as an analog line. The device includes adapters to correct the polarity problem, but you have to buy an extra doohickey like **RoadWarrior's Modem Doubler** (\$99.99) to connect to a digital line.

RoadWarrior Modem Saver Plus, \$29.99



Hand-Size Hard Drives

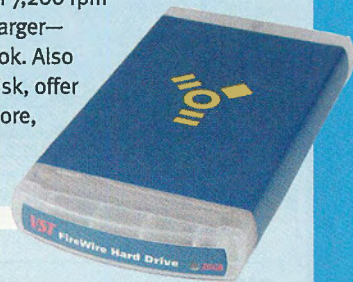
When you're on the road, an external hard drive is the best solution for multigigabyte transfers such as captured video footage. All external FireWire hard drives use an off-the-shelf IDE drive and an IDE-to-FireWire bridge within their cases. The smallest and most portable models, such as **QPS's Qué M2 drive** (\$289 for 10GB model, www.qps-inc.com) and **SmartDisk's VST FireWire Thin Drive** (\$299.95 for 10GB model or \$399.95 for 20GB model), use relatively slow notebook hard drives (typically 4,200 rpm). However, you can fit one of these devices in a shirt pocket.

If you need rapid-fire data transfer, consider 7,200 rpm mechanisms, but be aware that they're much larger—typically the size of a hardback *Harry Potter* book. Also consider that a couple of vendors, like SmartDisk, offer combo USB-FireWire hard drives. These cost more, but USB gives you the ability to interface with both PCs and older Macs.

SmartDisk VST FireWire Thin Drive, \$399.95



QPS Que M2, \$289



Carry-Around Cables

Targus's Retractable Telephone Cord (\$14.99) carries a spring-loaded phone cord in a pocket-size plastic box. A similar device containing an Ethernet cable costs \$24.99. No more cable clutter inside your bag—and all the more room for your two-week Hostess Twinkies supply.

Targus Retractable Telephone Cord, \$14.99



Cut the Wires

Shed your shackles and ditch your desk—you can stay connected from almost anywhere.

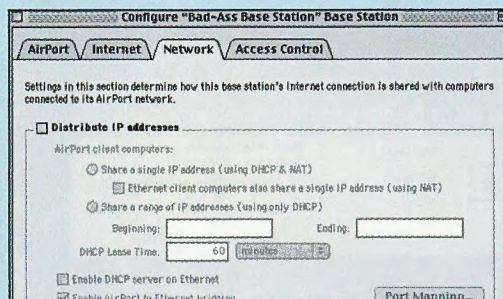
Computing Without Wires: It sounds like a self-help book, along the lines of *Learning to Love Without Guilt*. Sure, the jump to wireless can involve some separation anxiety, but once you make it, you'll feel liberated. Heck, you can even send email messages when you're on the porcelain throne if you wish (just don't send any to us from there).

At the center of your wireless world is AirPort (actually, any

Scenario 1: Merging Wireless and Wired

If you're integrating an AirPort Base Station with an existing Ethernet network, begin by plugging the Base Station into a port on your network's router, hub, or switch. In the Administration Utility, click the Network tab and uncheck the Distribute IP Addresses box. The Base Station now acts as a bridge between the wireless network and your conventional Ethernet network. Be warned, though: You won't have any firewall capabilities unless you use an Internet router or special software on each computer.

device that carries a WiFi logo, which affirms that it conforms to the 802.11 specification, *should* work—but AirPort is the best option for 100 percent Mac networks). The trick is setting up your Base Station. Sure, the AirPort Setup Assistant makes things a cinch, but many configurations—even simple ones—require that you use the AirPort Administration Utility (included with AirPort software). Here are four typical setup scenarios.



If you add AirPort-connected computers to an existing Ethernet network, deselect the Distribute IP Addresses box.

Run, AirPort, Run

A few modifications can make a world of difference in helping AirPort run more efficiently.

1 Get a little closer. Wireless networks step down in speed to ensure reliability when you move farther away. For best results, keep the Base Station within 100 feet of the most-distant computer.

2 Location, location, location. Don't locate your Base Station or computers near microwave ovens, large electrical motors (such as a furnace's), or refrigerators. Also try to keep the Base Station in the same line of sight as the computers. Use the Optimize Placement tool under the AirPort tab within the AirPort Administration Utility to gauge performance. If you experience interference, you can patch the

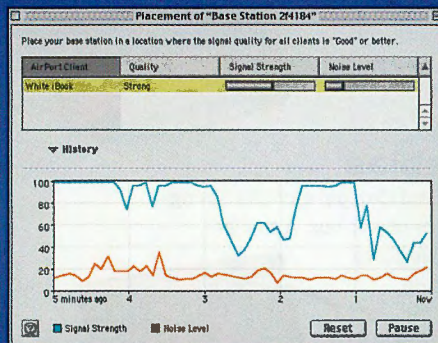
problem by checking the Enable Interference Robustness box under the AirPort tab, though this will sap speed.

3 Enlarge your antenna. AirPort users who want to increase range *and* are daring can check out Andrew Clapp's Web site (www.netscum.com/~clapp/wireless.html) for instructions on how to build an antenna out of stuff you have lying around your house (a Pringles can, for example). Note, however, that you need to crack the case of your Base Station to do this, so you may as well add your warranty card to the recycling pile. Also, if you do this hack incorrectly, the FCC may kick down your door.

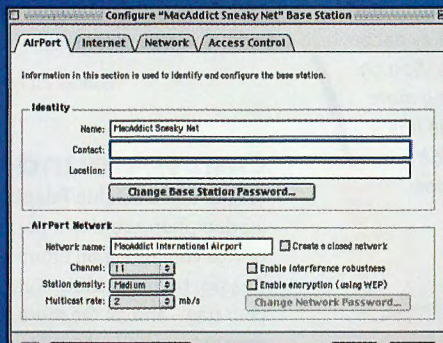
4 Change the channel. If you own a really big home and use two base stations, set the channels as far apart as possible to reduce the

chance of interference. For example, set one Base Station to use channel 1, and the other to use channel 11 (under the AirPort tab in the Administration Utility).

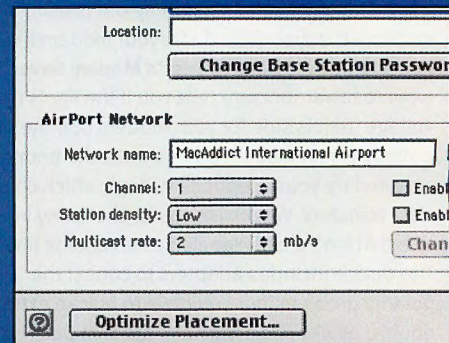
5 Keep it low density. If you have only one Base Station, use the pop-up menu under the AirPort tab in the Administration Utility to set Station Density to low; that will tell computers not to search for other Base Stations and to be satisfied with whatever transfer rate they can muster. That will also set the Multicast rate to a low setting and thereby ensure more range. The Multicast rate sets a *minimum* speed the Base Station will allow, not a maximum. The default is 2 Mbps, but if you're really hurting for range, you can drop that to just 1 Mbps. If a computer cannot achieve that data rate, it won't connect at all.



The Optimize Placement tool can help you chart signal strength and identify sources of interference.



If you have more than one Base Station, put them on different channels.



If you only have one Base Station, set Station Density to low.

Buddy, Can You Spare Some Bandwidth?

Is the scruffy guy sitting on the park bench with his laptop really writing the Great American Novel? Or is he stealing Internet access via your neighbor's unsecured wireless network? There are both immoral and acceptable ways to get free, high-speed Internet access, although the latter usually require that you pay for a cup of coffee (unless you're a cheap bastard).

1 Know your networks. A company called Surf and Sip installs wireless access in cafes and hotels; visit www.surfandsip.com for a list of businesses that offer free service. Several online directories, such as Personal Telco Project (www.personaltelco.net), list available access points worldwide.

2 Stake out apartment buildings. Sitting in a sixth-floor office with an iBook located next to a window, we were able to connect to a pretty fast network, probably located in the apartment building next door. Mysterious Macs on the network showed up in our Chooser, though we couldn't connect to any volumes, and if we moved away from the window, we lost our connection.

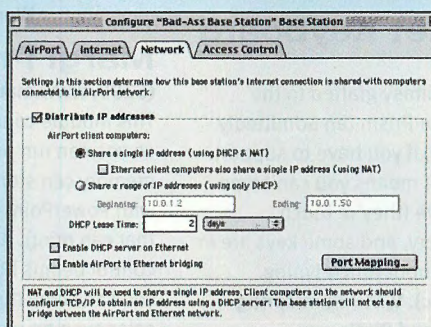
3 Take it to a cafe. Starbucks announced it would implement wireless access to its coffee shops later this year. In the meantime, we tried out a cafe called the Butler and the Chef, which uses the Surf and Sip service. There we got download speeds of 1.2 MBps—that beats flogging a dial-up connection at home. The coffee's better, too.



Argh! If I 'as to put forth any booty for this Internet voyage, I'll 'ave to keelhaul some scurvy dog! And give me a non-fat soy latte while yer at it. Yar!

Scenario 2: Wireless-Only Network

If you're starting from scratch and connecting only wireless-capable computers, leave the Distribute IP Addresses box (under the Network tab) checked. That will enable the Base Station to act as a router and share a single external IP address (for example, one provided with a DSL or cable-Internet account) among all the computers on the wireless network. You also need to select the button labeled Share A Single IP Address (Using DHCP & NAT), unless you own a block of static IP addresses you want to distribute.



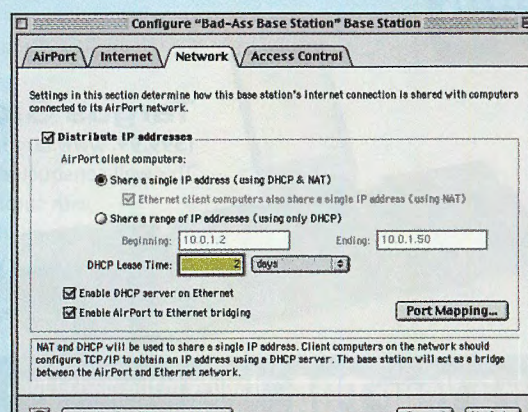
If every computer on the network is connecting wirelessly, check the Distribute IP Addresses box and the Share A Single IP Address button.

Scenario 3: Wired, Wireless, and the Base Station Modem

This one's for all of you who want to use a Base Station and its built-in modem for a dial-up connection, and who have a network that consists of both wired and wireless-networked computers. Plug your hub, switch, or router into the Base Station. Under the Network tab, check all of the following boxes or buttons:

- Distribute IP Addresses
- Share A Single IP Address (Using DHCP & NAT)
- Ethernet Client Computers Also Share A Single IP Address (Using NAT)
- Enable DHCP Server On Ethernet
- Enable AirPort To Ethernet Bridging

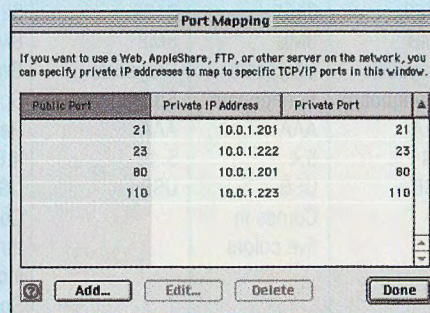
These settings let all of the computers share the dial-up connection and see each other on the network for file-sharing purposes. They also allow you to hide the machines from other computers on the Internet via Network Address Translation (NAT)—this technology not only allows the Base Station to share one IP address among several computers, but also makes it harder for outsiders to identify those computers.



If your Base Station is serving a dial-up account to both wired and wireless computers, check all of these options.

Scenario 4: Setting Up Wireless Servers

For a Web server to operate properly in an all-wireless network that uses NAT, you must set up port mapping on the Base Station. Port mapping tells the Base Station it should direct requests coming in from the Internet on port 80, such as those of a browser, to a particular computer on the network—the Web server. In the Administration Utility, click the Network tab, then click the Port Mapping button. A dialog box appears where you can add new mappings. Click Add, then enter the port number in the Public Port box (80 for a Web server, 21 for an FTP server, and 110 for a mail server; find a complete list at www.portsdb.org). Enter the IP number of the proper computer in the Private IP Address box. The Private Port box should almost always contain the same port number you entered earlier.



Running a server on your wireless network? Use the Port Mapping settings to direct incoming traffic to the proper computer on your network.

Power to the PDA

Is lugging a laptop too much for you? A PDA can do *almost* as much as your Mac.

Addresses, contacts, appointments, and to-do lists—the brains who invented the PDA may have started with these mundane applications, but modern devices can do much more than simply tell you when Grandpa's supposed to take his blood-pressure medicine. Handspring

introduced the concept of tricking out your PDA with Springboard expansion modules, so there's much more gear available for a Handspring device than for other handhelds. Still, you can add plenty of functionality to nearly any Palm OS–based PDA.

Xircom Wireless Ethernet Module

(\$299, www.xircom.com) Xircom Wireless Ethernet Module, \$299

This module lets you connect wirelessly to 802.11b networks, including AirPort-based ones, although the connection is often flaky. It comes with Handspring's Blazer Internet browser, so if you're within range, you can browse the Web or send email.

Works with: any Handspring model



Fellowes Mobile PDA Charger

(\$29.99, www.fellowes.com)

Plug one end into your cigarette lighter and the other end into your rechargeable PDA. This model also comes with an airplane adapter, which you can use to power up when you fly on airplanes with compatible power ports.

Fellowes Mobile PDA Charger, \$29.99

Works with: Palm Ilc, V



Fellowes PDA Pocket Keyboard

(\$47.99, www.fellowes.com)

This tiny keyboard felt very flimsy grafted to the bottom of a Handspring Visor Prism (an admittedly heavy model). Unfortunately, if you have to support your PDA with one hand, that means you can't type with two. The keys don't move (they're touch sensitive), they're very slippery, and some keys are in the wrong places, so forget about touch-typing.

Works with: Palm III (not Ilc), V, Vx; Handspring Visor Solo, Deluxe, Prism, and Platinum

Fellowes PDA Pocket Keyboard, \$47.99



Margi Presenter-To-Go

(\$299, www.margi.com)

This module connects your Handspring to a monitor or projector so you can run presentations. The module's 2MB of onboard memory can store up to 100 slides (created with PowerPoint or any other application that can print). An included remote control beams IR signals to your PDA so you can scroll through slides, which retain their color even on monochrome PDAs. The slides load quickly and look great (it's your PowerPoint skills that may need work).

Works with: any Handspring model

Margi Presenter-To-Go, \$299



Targus Stowaway Portable Keyboard

(\$99.99, www.targus.com)

This well-constructed keyboard folds into a pack the size of a fat PDA. Unfolded, it's a full-size keyboard with surprisingly good key action. The only problem: Because the keyboard isn't completely rigid, you need to set it on a hard surface to use it—no lap typing for you.

Works with: Handspring Visor Solo, Deluxe, Prism, and Platinum; Sony Clie

Targus Stowaway Portable Keyboard, \$99.99



Pick Your PDA

If you're in the market for a handheld, check out our handy chart.

Note: New models may be available by the time you read this.

	Handspring, www.handspring.com					Sony, www.sonymstyle.com/micros/clie		
Device	Visor	Visor Deluxe	Visor Platinum	Visor Edge	Visor Prism	Clie PEG-S320	Clie PEG-N610C	Clie PEG-N710C
Price	\$129	\$169	\$199	\$299	\$399	\$199.99	\$399.99	\$499.99
Memory	2MB	8MB	8MB	8MB	8MB	8MB	8MB	8MB
Display	Grayscale	Grayscale	Grayscale	Grayscale	16-bit color	Grayscale	16-bit color	8-bit color
Expansion	Springboard	Springboard	Springboard	Springboard	Springboard	Memory Stick	Memory Stick	Memory Stick
Battery	AAA	AAA	AAA	Rechargeable	Rechargeable	Rechargeable	Rechargeable	Rechargeable
Weight (ounces)	5.4	5.4	5.4	4.8	6.9	4.27	5.65	5.65
Connection	USB	USB	USB	USB	USB	USB	USB	USB
Extras/Extra Annoyances		Comes in five colors		Comes in three colors; includes Springboard adapter			Comes in two colors	Built-in MP3 player; remote control; comes with 8MB Memory Stick

Requires third-party syncing software, available from markspace (www.markspace.com) for \$29.95.

Apps for the Road

Blowing this Popsicle stand for better climes? Take these Palm applications with you. For even more indispensable apps, see our article "Pack Your Palm" (Mar/01, p34), and browse the PalmTracker online database (www.palmtracker.com).

1 **MobiMate's WorldMate** (\$20, www.mobimate.com). This suite includes a world clock; converters for currency, temperatures, measurements, and clothing sizes; and best of all, an alarm clock with customizable messages and a snooze function.

WorldMate's clothing-size converter says we need Frankenstein-size shoes when shopping in Rome.



2 **United, American, and Continental Airlines** (all free; United: www.ual.com/site/primary/o,10017,1891,00.html, American: www.aatimetable.com/1/PalmOS/index.html, Continental: <http://cotimetable.com/cotimetable/index.htm>). Before your flight's cancelled—and you know it will be—download one of these apps so you have a shot at pinpointing your next chance to get out of Dodge.

Find out when the next United flight takes off from your airport.

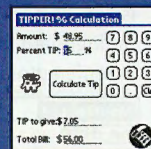


3 **Bdicty** (\$8 to \$69 for varying dictionaries, www.beiks.com). This program works with a variety of language dictionaries to help you translate words or phrases to another language. Some dictionaries are free, others cost.

4 **JunglePort** (free, www.jungleport.com). This utility provides zoomable color maps and a directory of businesses and restaurants in more than 60 cities around the United States. It's similar to Vindigo, but has better maps (although the restaurant reviews are too kind).

5 **Denton Software's Tipper** (free, www.dentonsoftware.com). The double-the-tax method of calculating a tip really screws waiters in states with low tax rates. Tipper tells you how much to tip for different services, then calculates the tip and total.

Tipper tells you how much to tip barbers, coat checkers, car parkers, and dog walkers, among others, and calculates your bill.



GeoDiscovery Geode

(\$289, www.geodiscovery.com)

GeoDiscovery Geode, \$289

You've just regained consciousness after a night of carousing. "Where am I?" you ask. You pull out your Handspring with a Geode attached and instantly ascertain that you're in a dumpster behind the Kroger two blocks from your hotel. Great, but the Geode doesn't provide color maps, and it draws very slowly unless you greatly reduce the amount of detail contained in maps. Plus it doubles the size of your PDA, making you look like a dweeb when you pull it out on a street corner.

Works with: any Handspring model



Xircom Modem 56 GlobalAccess Module

(\$89.99, www.xircom.com)

The GlobalAccess module is a poor man's Internet-away-from-home, at less than a third of the price of a wireless modem and free from high wireless access charges. Better yet, this pocket rocket performs substantially faster than its wireless compatriot. Xircom Modem 56 GlobalAccess Module, \$89.99

Works with: any Handspring model



Electric Fuel Instant Power Charger

(\$19.95, www.electric-fuel.com)

You just boarded a 5-hour, coast-to-coast flight when you discover that your PDA's rechargeable battery is dying. No worries—turn to one of these compact zinc-air cartridges. One cartridge is supposed to charge a PDA fully three times. The price is a little steep for a battery, but cheap for data insurance.

Works with: Palm V, Vx; Handspring Visor Prism
Coming soon: Palm m500 and m505; Handspring Visor Edge



Electric Fuel Instant Power Charger, \$19.95

PowerQwest Sun Catcher Sport

(\$99, www.powerexperts.com)

Sun Catcher Sport is a day-planner-size folding pack that holds two solar panels, an NiMH battery, and a cigarette-lighter power adapter. This 15-ounce pack will output a peak power level of 4.2 watts to keep your PDA or cell phone going. If you want enough power to charge a laptop's battery, the Sun Catcher Professional (\$299) puts out 14.5 watts, but it doesn't have a battery backup.

Works with: any PDA or cell phone as long as you have a car-plug adapter



PowerQwest Sun Catcher Sport, \$99

Palm Computing www.palm.com

Device	IIc	Vx	VIIx	m100	m105	m500	m505
Price	\$299	\$299	\$199	\$129	\$199	\$399	\$449
Memory	8MB	8MB	8MB	2MB	8MB	8MB	8MB
Display	8-bit color	Grayscale	Grayscale	Grayscale	Grayscale	Grayscale	16-bit color
Expansion	None	None	None	None	None	SD/MMC	SD/MMC
Battery	Rechargeable	Rechargeable	AAA	AAA	AAA	Rechargeable	Rechargeable
Weight (ounces)	6.8	4.0	6.7	4.4	4.4	4.0	4.9
Connection	Serial	Serial	Serial	Serial	Serial	USB	USB
Extras/Extra Annoyances			Built-in wireless	Interchangeable color faceplates available/ reduced screen size	Interchangeable color faceplates available/ reduced screen size		Backlit Graffiti area

Requires either the Palm MacPac or the PalmConnect USB Kit.

Surfin' PDA

All existing wireless Internet options for your PDA utilize cellular-phone networks, which makes access pretty easy in populated areas. However, access ain't fast, and Web surfing on a PDA can be an exercise in patience.

Option 1: Wireless PDA Modem

Palm Computing introduced the concept of wireless Internet access with its Palm.net service. The Palm VII features a built-in modem that works at 9.2 Kbps (translation: pretty freakin' slow). If you need more speed, companies like Go America, OmniSky, and Verizon Wireless (among others) sell package deals that include a Novatel Minstrel wireless modem (see "Wireless Services Galore," below). You'll get speeds of 19.2 Kbps, about the same as a 1994-era landline modem.

We tried out the OmniSky deal. Installing the modem and Mac-based setup software is very easy: When you insert the Springboard modem module into a Visor, the module automatically installs all the necessary

software on your PDA.

You activate the service via an Internet browser. Sign-ons are quick and noiseless, and trudging through the streets of San Francisco, we found the service capable

OmniSky's Web browser doesn't flatter the MacAddict.com site. Blech!

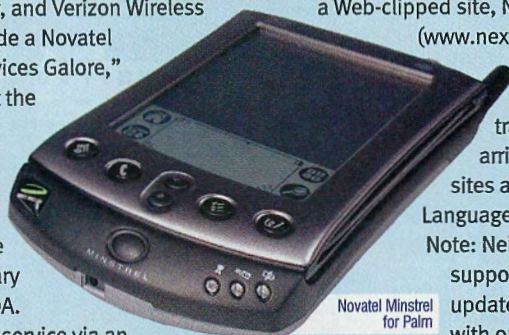
of tolerable speed for short emails or instant messaging with the included Yahoo Messenger. We particularly liked a Web-clipped site, NextBus

(www.nextbus.com), which

tells you when GPS-enabled mass-transit buses or trains will arrive at your stop (Web-clipped sites are formatted in Wireless Markup Language, or WML, to speed loading).

Note: Neither GoAmerica nor Verizon explicitly supports Macs (as OmniSky does), but the PRC updaters we downloaded with our Mac from the GoAmerica site worked fine on our Handspring Visor.

Yahoo Mail works very well on a PDA. Just think, you can filter your spam while waiting for the bus.



Option 2: Roamin' and Phonin'

If you have a cell phone, you can connect your phone to your PDA via a special cable that typically costs around \$129 (www.mobileplanet.com). Or if you own a Palm m500 or m505, you can connect via these devices' IR ports. You still have to pay for cell-phone minutes, plus any extra fees your provider imposes for Web access.

In order to connect this way, you must have a data-enabled cell phone. And know that the connection will top out at 14.4 Kbps. You also

need specialized applications, which you can get in Palm's Mobile Internet Kit (\$39.95).

Bluetooth technology will soon become another option. Bluetooth is a wireless, short-distance data-transfer protocol you can use to download data from your cell phone and beam it to your PDA. One of the first such devices, TDK's Blue5 module (\$200, www.tdksys.com/blue5), slips onto the back of a Palm V or Vx and allows you to transfer data to and from a Bluetooth-enabled cell phone.

TDK Blue5, \$200

Option 3: Wait for Faster Web Access

Are the available options depressing you? Rest assured: Faster wireless Web access is in the works. A third generation of cellular data technology, dubbed 3G, will attempt to deliver up to 5-Mbps throughput; unfortunately, you won't see anything like that for at

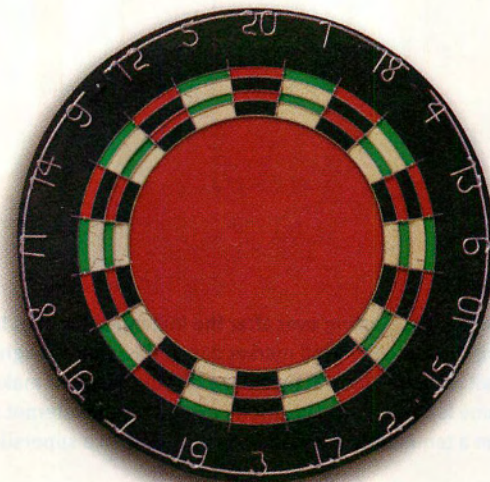
least a year. In the meantime, there is some hope. A new cellular technology called 2.5G will allow download speeds up to ten times faster than current speeds, and it may even be available by the time you read this.

Wireless Services Galore

If you're shopping around for a wireless PDA service, here are some of your options.

Company	Palm	OmniSky	GoAmerica	Verizon Wireless Mobile IP
	www.palm.com/wireless	www.omnisky.com	www.goamerica.com	www.verizonwireless.com/mobile_ip
Devices Supported	Palm VII	Visor Platinum, Prism, or Edge; Palm V, Vx, m500	Visor Platinum, Prism, or Edge; Palm III, V	Palm III, V
Modem Price	Included; \$9.99 activation fee	\$269; \$19.95 activation fee	\$99; \$29.95 activation fee	\$254 for Palm V version; \$287 for Palm III version; \$25 activation fee
Service Price	\$9.99 (50KB per month), \$24.99 (150KB per month), \$0.20 per extra KB, \$44.99 (unlimited)	\$39.95 per month	\$9.95 (25KB per month, plus \$0.10 per extra KB with CDPD network and \$0.30 for BSWD network), \$44.95 (unlimited)	\$24.95 per month, one-year contract
Speed	9.2 Kbps	19.2 Kbps	19.2 Kbps	19.2 Kbps
What You Need to Know	The original wireless Internet	Web clippings and limited Web browsing; rebate on modem price for long-term contract	Web clippings and limited Web browsing via Blazer browser	Web clippings and limited Web browsing

Alan Stafford can't wait to be on the road again, goin' places he's never been and seein' things he may never see again.



YES, IT IS THIS EASY.

At REAL Software, we like it simple. Take our award-winning product, REALbasic, for example. People call it the powerful, easy-to-use tool for creating their own software. We call it a problem solver. You've probably said, "Wouldn't it be great if there was a little application that...." REALbasic fills that blank.

Using a single, simple design, REALbasic compiles native applications for Macintosh, Mac OS X and Windows without platform-specific adjustments. Each version of your software looks and works just as it should in each environment.

And new features in REALbasic 3.5 make creating applications even easier. Add 3D graphics with Rb3D. Create custom solutions for Microsoft Office by controlling every aspect of Office documents. Execute modifiable code on-the-fly with RbScript. And use our DataControl to create database front-ends in minutes — with no programming. We've even added one of the most complete Regular Expressions engines anywhere.

Experiment, explore, learn and innovate. Create prototypes or professional applications. Just drag and drop interface elements while REALbasic handles the details. You concentrate on what makes your stuff great — your ideas! Complex problems shouldn't require complex solutions. The answer is REALbasic.



Download a free demo. www.realbasic.com

GET A JOB!

Create a slick online résumé to help you stand out from the masses.

Whether you're new to the job market, you're starting over after the Millennial Internet Implosion, or you just need a second job to cover those gambling debts, today's job market demands a well-thought-out plan of attack. Sure, you can send the standard paper or email résumé—but will that show off your talent or make you stand out to a potential employer? Not unless your name is Steve Jobs. Luckily, by exploiting the Internet and your trusty Mac, you can post anything online, from a ten-minute copy-and-paste résumé to a superslick Web site that's sure to get you noticed.

Obviously, this all starts with the résumé itself. So before going any further, type up your résumé in plain old ASCII text (pronounced ass-key, it's the lowest known form of text), run a spelling check twice, and have three of your closest friends and enemies proof it. Once you're satisfied, read on and find out how to jazz up your résumé and post it online for the world to see. Then it's just a matter of sitting back and waiting for the offers to roll in.



by **Niko Coucouvanis**
illustration by **A.J. Garces**



Find BBEEdit Lite 6.1.1, a Dreamweaver 4 trial, and an Adobe Photoshop 6 tryout on The Disc.

PLAN A: The 10-Minute iTools Jobbie

Time-Suck Rating: Quick, easy, and painless—go book yourself 18 holes of golf.

THE TOOLS

- Apple iTools (free; www.apple.com/itools)
- Mac OS 9 (\$99 alone, free with \$129 Mac OS X purchase; www.apple.com)

If you need an online résumé fast but don't think you have the time, money, and/or Web skills to do it yourself, think again. All you need is iTools and the stylized set of templates it offers (unfortunately, you're confined to a résumé that includes only the information *Apple* thinks is important to a good résumé). If prefab styles make your arm hair curl, stick around for Plans B and C.

STEP 1. Stake Your Claim

First things first: If you're not a member of iTools, maneuver over to the Sign Up button at www.apple.com/itools. When picking a member name, remember that you'll be passing out this handle to prospective employers—42oslack@mac.com won't inspire much confidence.

Signing up for iTools is as easy as signing your name.

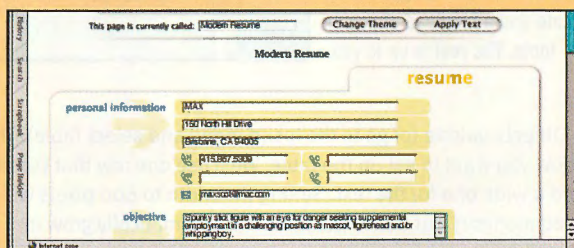


STEP 2. Pick a Template

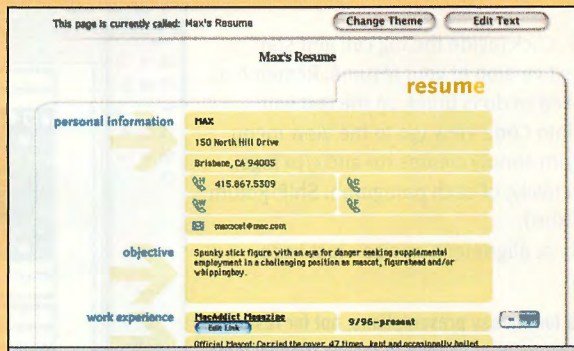
Head over to the HomePage section of iTools. Tucked away behind the Resume button, Apple offers a choice of templates: Modern, Classic I or II, or Basic. Pick one, click the Edit Text button, and paste in your details. If you don't already have your résumé in copy-'n'-paste condition, stop. Log out. Composing a résumé requires time and your full attention. (For advice on creating a résumé, see "Resume with the Résumé," right.)

Use the plus (+) and minus (-) buttons to add or remove text boxes to accommodate your résumé (keeping in mind that it's a brief introduction, not your life story). Don't forget to press the Edit Link buttons so you can link the companies for which you've worked to their respective home pages.

Apple's iTools lets you add or remove boxes as necessary and link to company home pages (hopefully they all still have home pages).



Here we're creating a résumé for our mascot Max using the Modern template. This is where you get to fill in all your achievements.

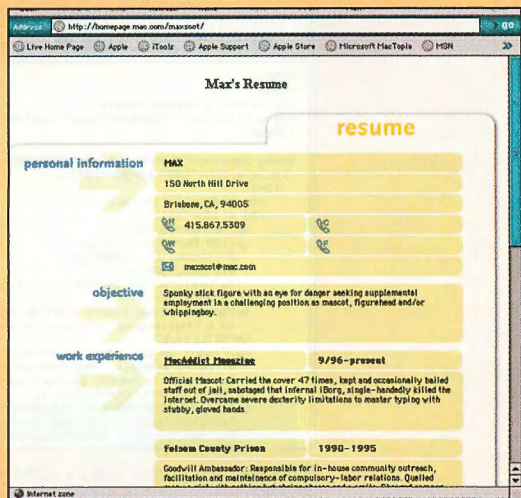


STEP 3. Put Yourself Out There

Click the Preview button for a final proofread, then click Publish. Voilà—your résumé is online, and iTools tells you where to find it (in our case, <http://homepage.mac.com/maxscot/resume.html>). Too much gumbo in that Web address? Since it's our first HomePage page, iTools also saved it as the default start page (index.html) at <http://homepage.mac.com/maxscot—that's a less unwieldy URL to send to potential employers>.

Check your stopwatch, congratulate yourself on a job well done, call your golf or tennis partners, and wait for your dream employer to call.

And there you have it—one modern résumé for one modern mascot.



The Non-iDisk Way

Before we get into the roll-your-own part, let's get the non- or anti-iTools crowd up to speed. Most ISPs (EarthLink, Pacific Bell, and so forth) provide templated, form-based page-building tools similar to those of iTools. And most ISPs provide raw Web space as well. If you don't know how to access your Web space, consult your ISP.

Whatever you do, don't mortgage your future job on a so-called "free" Web site ("free" as in laden with the host's advertising frames and pop-ups galore). We're not ones to name names, but if we had to, we'd mention Tripod, GeoCities, AngelFire, and many sites listed at the FreeWebSpace directory (www.freewebspace.net).

Resume with the Résumé

Here are some guidelines to keep in mind when composing your résumé.

- Most recruiters file résumés in computer databases to streamline the hiring process. Make your résumé easy to read, and use appropriate keywords to help the database match you to relevant job openings.
- Use plain text: 12-to-14-point Courier, Times, or Helvetica, with nothing fancier than ALL CAPS—bold if you're nasty.
- Shoot for one printed page.
- Don't have an "Objective" to list? No biggie—it's common to replace or augment the old standard with a "Skills" or "Qualifications" section.
- Are you a tech girl or guy? Real geeks list hardware and software they've supported or used—but if you're a real geek, you already know that.

PLAN B: The No-Frills HTML Résumé

Time-Suck Rating: Fairly fast and simple—time enough for nine holes of golf.

THE TOOLS

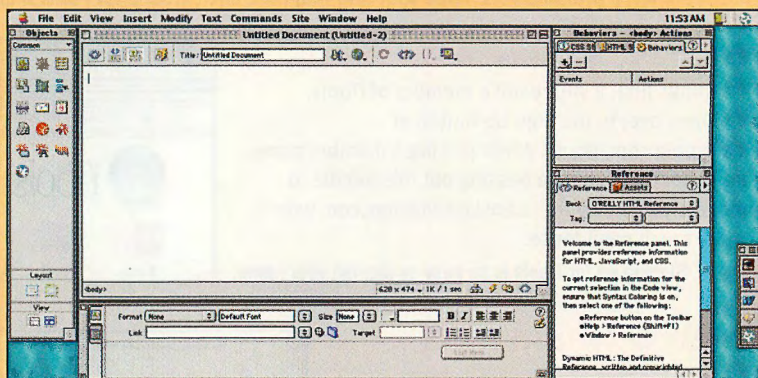
- Apple iTools and/or Fetch Softworks Fetch (\$25; www.fetchsoftworks.com)
- Bare Bones Software BBEdit Lite (free; www.barebones.com)
- Macromedia Dreamweaver 4 (\$299, trial on The Disc; www.macromedia.com)

If you're ideologically opposed to templates, Plan B is all about building your own HTML résumé and getting it online. Our goal here, with the help of Dreamweaver, is to create a superbasic HTML résumé that potential employers can print without any strange formatting problems.

STEP 1: Enter the Dream

Dreamweaver starts with a blank page flanked by an Objects palette on the left, a Properties Inspector below, and to the right, an HTML-reference crib sheet and a daunting überpalette of JavaScript Actions and Behaviors—which we'll ignore for now. (To become more familiar with these palettes, see "Get With the Program," p38.) Replace Untitled Document in the Title box with a more inspiring name and save the blank page as `resume.html`—or `index.html` if this résumé will be your start page.

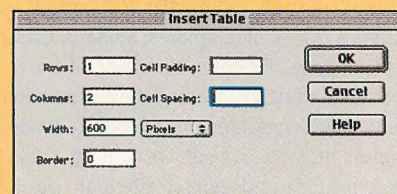
Dreamweaver welcomes you with a blank slate and a boatload of power tools. The rest is up to you.



STEP 2: Get the Table

Click the icon that looks like a table in the Objects palette (or go to the Insert menu and select Table). The Insert Table dialog box appears and asks how you want to set up the table. We'll use one row that contains two cells: a skinny one for a left margin, and a wide one for the text. Setting the width to 600 pixels will keep the table uniform on the variously sized monitors out there. The table will automatically grow in height to accommodate additions.

Set the table's parameters—you can adjust these later by dragging the on-page guides or entering pixel values in the Inspector.

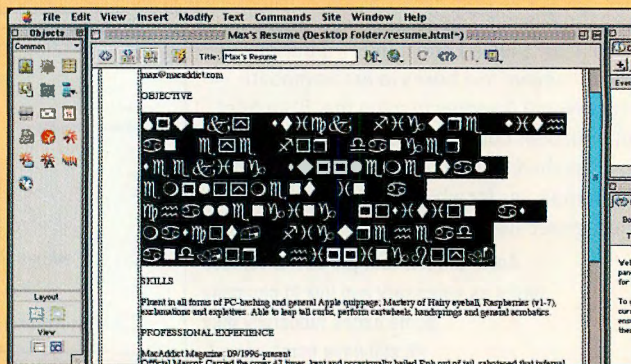


STEP 3: Just Add Text

Once you set up the table, the rest is gravy. Click inside the big cell and start typing, or copy and paste from the plain-text version of your résumé. Remember, this is still the no-frills version, so all we need to do is break up the text with paragraph breaks (press Return). Venture into Code View (go to the View menu and select Code), and you'll see that a Return simply creates `<p>` and `</p>` tags, designating the beginning and end, respectively, of each paragraph. Shift-Return creates a handy, single-spaced line break (`
`).

Use the Inspector to change the font style, alignment, or size—just keep simplicity and printer-friendliness in mind.

Wingdings are for cheezy presentations, not for résumés.
Use the Inspector to change to reader-friendly fonts.

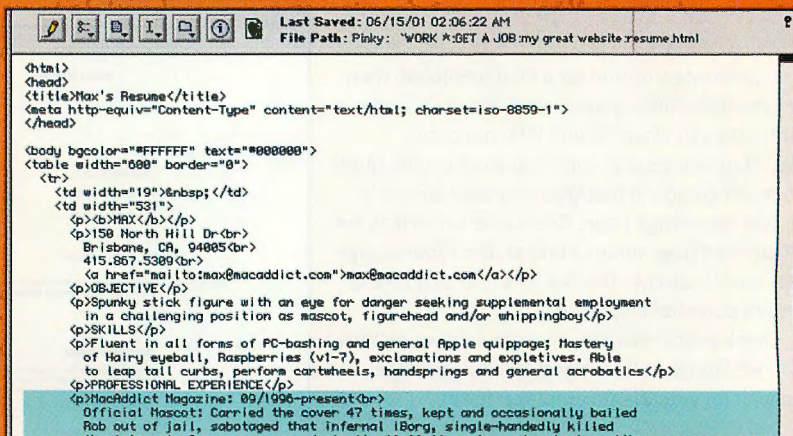


Proper Care and Feeding

Once your résumé goes live on the Web, you'll invariably find a typo, or you might need to add new job or educational information. If you don't plan on upgrading from the 30-day Dreamweaver trial, don't worry, be happy. Here's how easy it is to maintain your HTML files with the humble (and free) BBEdit Lite.

Say you want to add another job to your "Experience" section. Open the `resume.html` file in BBEdit Lite. What a mess, eh? Pay no mind; press Command-F to bring up the Search dialog box, then type in *experience*. When you get there, just copy and paste to replace the specifics.

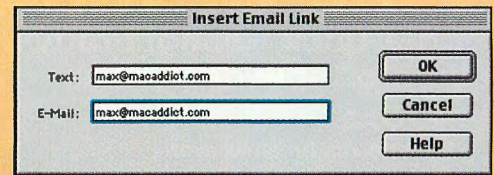
Each set of `<p>` and `</p>` tags contains one paragraph. Where you don't want a full paragraph break, the line-break tag (`
` with no closing tag) is a handy widget that does just what its name implies.



Mind your `<p>`s and `
`s when you want to change your résumé text.

STEP 4: Stay in Touch

Finally, we'll hot-link the email address in our contact information paragraph. Copy the whole address (that is, max@macaddict.com). Without moving the cursor in the document window, press the Object palette's Insert Email icon (it looks like a little envelope), or go to Insert and select Email Link. Paste the address into both the Text and E-Mail boxes. If the email link occurred in its own paragraph, we could have just highlighted the text in place and filled out the Email Link info instead of cutting and pasting the address. But since only a line break separates our email address from the rest of the text in our résumé, Dreamweaver treats the address differently (see "Proper Care and Feeding," p36, for more on HTML paragraphs and line breaks).

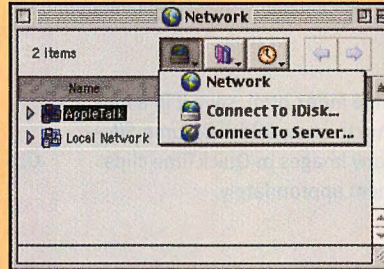


This step turns your email into a live, clickable link.

STEP 5: Get Ready for Primetime

The iTools Way

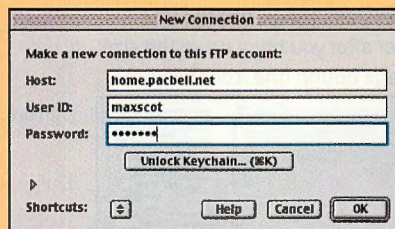
Clicking the Open Your iDisk button on the iDisk Web page mounts your Web space on the desktop, just like another hard drive with a fancy icon. Amazing, no? It's just as easy to launch iDisk from the good old Chooser (using AppleShare, click Server IP Address and enter idisk.mac.com, then your log-in info). Easier yet, mounting your iDisk is a preset shortcut in Mac OS 9's Network Browser and in Mac OS X's Go menu. Inside your iDisk, the Sites folder is your live Web directory—if you've built any HomePage-template pages, they're in there. Once you put `resume.html` in the Sites folder, it's available to the world at <http://homepage.mac.com/maxscot/resume.html>.



iDisk access is built into Mac OS 9 as a Network Browser shortcut.

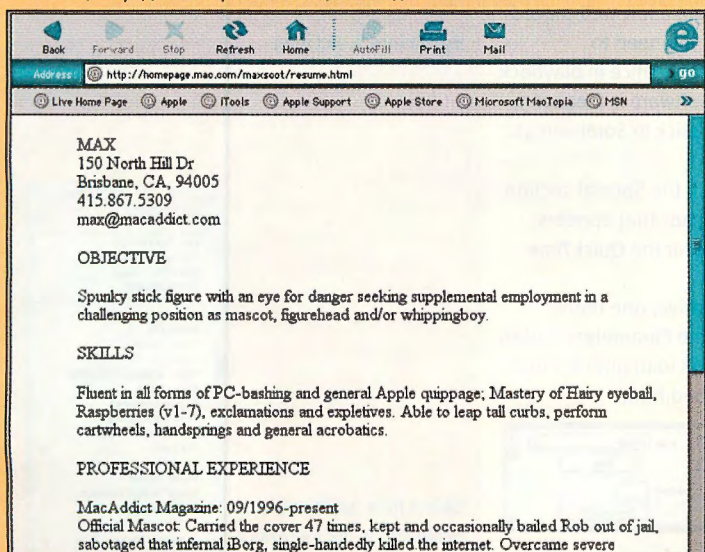
The Non-iTools Way

If you plan on having your ISP host your Web page, you need an FTP (file transfer protocol) program to get your files to the remote Web server. We used the old standard, Fetch. Mac OS X users will even find Fetch for OS X in their iDisk's Software folder.



Once you tell Fetch what to fetch, you can make a shortcut (Command-S).

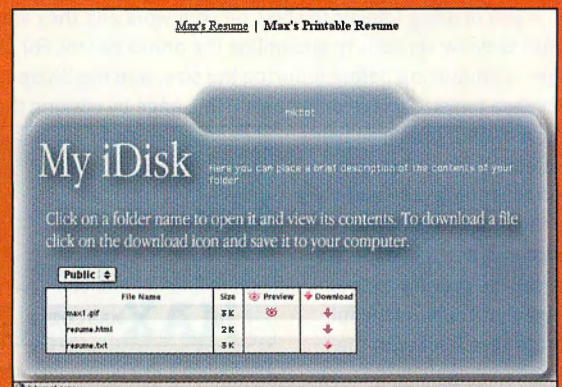
Open a New Connection in Fetch, then type in your Web host and log-in information as provided by your ISP (the information should resemble our [pacbell.net](http://home.pacbell.net) example in the screenshot above). If an index file already appears in your Web space (probably some variation of Under Construction), it's just a placeholder. Drag the `index.html` file into the window to make that page show up at your personal URL (in our case, <http://home.pacbell.net/ncouc/>).



Our final résumé isn't pretty, but printers and databases love this minimalist look.

iTools All the Way

One thing you may want to do with your plain, printer-friendly résumé is link it from your iTools résumé, if you built one in Plan A. But how do you do that when the iTools résumé template is so limiting? It's simple—fill out and publish an iTools FileSharing template. The resulting page lists whatever files you upload to your iDisk Public folder—for instance, your printer-friendly résumé—and links back to your main résumé page. In return, the résumé links to the FileSharing page. Likewise, you can use the Photo and iMovie Gallery templates if you want to show off your digital portfolio. Note that your FileSharing page links to all of your HomePage templated pages, so make sure not to upload anything that might embarrass you.



The iTools FileSharing template lets you share and share alike.

Builder Beware

Building a Web résumé isn't rocket science (neither is HTML, for that matter), but you should watch out for a few weirdnesses.

- Be *CaSe senSiTiVe* when naming files: Stick to lowercase file names. You can feel free to mix cases when it comes to HTML tags, though.
- The final forward slash in a URL (as in <http://.../maxscot/>) isn't necessary, but it saves a millisecond or three by telling the Web server that `maxscot` is a directory folder instead of a file.
- Files may break if you transfer them from your Mac to the server in the wrong format. Text files (for example, `index.html`) are Text; nontext files (everything else—JPEG, GIF, SIT, HQX, PDF) are Binary. Modern FTP clients have an Automatic mode, which can usually preserve your format.
- This isn't a weirdness so much as it is a piece of advice: Buying a custom domain name, such as www.maxthemascot.com, costs only \$35 a year. Check InterNIC (www.internic.com) for information on custom domain-name registration. Your ISP hooks you up with the Web space behind your dot-com.

Plan C: Top-Shelf Résumés

Time-Suck Rating: Pretty involved—spend this week's green-fee funds on a comfortable desk chair.

THE TOOLS

- Macromedia Dreamweaver 4
- Bare Bones Software BBEdit Lite
- Adobe Photoshop 6 (\$609; www.adobe.com)
- Media 100 Cleaner 5 (\$599; www.media100.com)

LOW-COST ALTERNATIVES:

- Lemke Software Graphic Converter (\$30; www.lemkesoft.de)
- Adobe Photoshop Elements (\$99; www.adobe.com)
- Apple QuickTime Pro (\$29.99; www.apple.com/quicktime)
- Apple iMovie 2 (free for OS X, \$49 for OS 9; www.apple.com/imovie)

If you've got time, money, and design skills to throw around, build an entire Web site devoted to yourself. We won't dwell on the actual design—that's between you and the gods. But here's how to add an introductory page, samples of your work, and links. Of course, if you go this route, you'll also want to build a résumé that looks more designed than the one we made in Plan B and less templated than our Plan A version—so apply the tips in this section as you work on that prettier résumé.

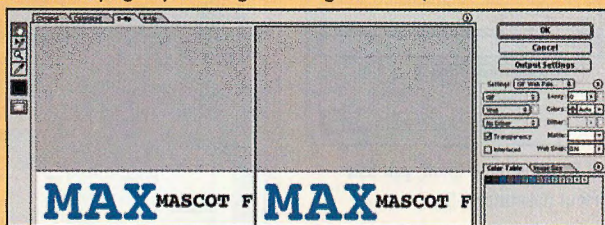
STEP 1: Step Up to a Site

If you've been following along at home and you named your résumé index.html, save it in a new folder as resume.html—you need to make a new index page. Name the new folder *Resume Site*—this folder will contain all of your HTML pages. If you plan to add any images or QuickTime clips to the pages, create new folders inside Resume Site and name them appropriately.

STEP 2: Prepare the Images

You'll probably want to use images for your site, such as samples of your work or cool, eye-catching headers and graphics. After cleaning up or creating your images in Photoshop, use the Save For Web command (under the File menu). In the resulting window, select JPEG compression for any photographs or artwork, GIF for technical drawings and line art. Save your images to the images folder inside your Resume Site folder.

If you're using images to show off your work and they are large in size and/or number, make small preview versions to streamline the photo gallery. For sharper thumbnails, use the Blur filter in Photoshop before reducing the size, and the Sharpen filter after you bring down the size. Put each full-size image on its own HTML page by clicking the Image button (the icon that looks like a tree) in Dreamweaver's Objects palette. Add the corresponding preview image to the index or subindex page and use the Inspector to link the preview to the page that contains the full image (see "Get With the Program," right).

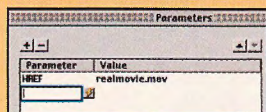


Photoshop's live before-and-after preview lets you tweak the compression ratio until it's just right. Trust us—there's a difference.

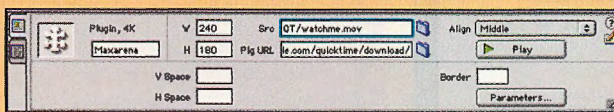
STEP 3: Got QuickTime? Get Reel

Just because Steve Jobs declared the dawn of the desktop-video revolution doesn't necessarily mean your home movies will land you a fat Hollywood job. Sometimes, though, a few well-placed QuickTime samples on the Web can help you stand out from the crowd. First you need to compress your video for the Web. The only real rule in compression: What you sacrifice in playback quality, you gain in download speed, and vice versa. The best compression software is Cleaner 5, although iMovie 2 or QuickTime Pro will also do the job. Whenever possible, stick to Sorenson as your codec. Here's how to embed QuickTime movie clips in your Web page:

1. Click the QuickTime Plugin object (the one that looks like a puzzle piece) in the Special section of Dreamweaver's Objects palette, and navigate to your movie via the dialog box that appears.
2. Set the movie's dimensions in the Inspector, adding 16 pixels to its height for the QuickTime control bar.
3. To keep your index page snappy, use QuickTime Pro to export a representative, one-frame placeholder (Poster) movie (see "20 QuickTime Tricks," Sep/01, p30). Click the Parameters button in the Inspector and use the HREF playback attribute so the real movie doesn't load until it's told. Apple lists all of the attributes at www.apple.com/quicktime/authoring/embed.html.



In the Parameters dialog box, it's plug-and-play.



The Inspector rules QuickTime—but you'll have to get your own Parameters (playback settings) from Apple.

Get With the Program

To get the most out of Dreamweaver, familiarize yourself with the program's main tool palettes.

Objects

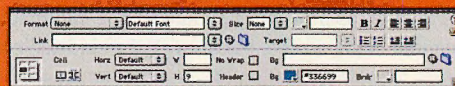
This palette lets you add almost any page element, from simple email links to tables and DHTML Layers, plug-ins, images, special characters (trademark symbols, ellipses, and so forth)—the whole nine yards. Position the cursor where you want to place an object and click the appropriate icon.

The Objects palette ain't short on icons—and more lurk behind the top-right arrow.



Properties Inspector

Insert or highlight anything on the page (including text, graphics, tables, layers, and QuickTime movies), and the Inspector presents that item's available options. Alignment, formatting, dimensions, hyperlinks, colors—press the lower-right triangle to unlock them all.



Ground zero: You can tweak 99 percent of your Web page's elements from here.

Behaviors & Actions

Hyperlinks and DHTML layers recognize the mouse events—clicking a link, for example—that trigger most of JavaScript's Behaviors & Actions. You can go nuts with interactive image rollovers or even float a mouse across the screen on a timeline. For our Web page, we stuck to the simple Open Browser Window to pop up sample images of our work in separate windows.

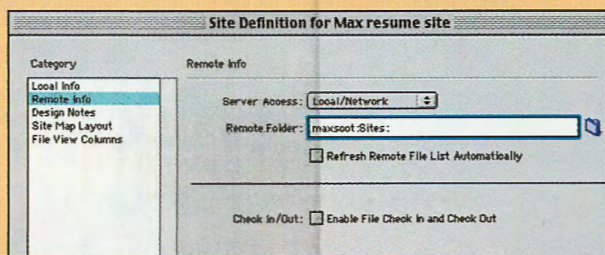
Select from any number of behaviors in the Behaviors & Actions palette.



STEP 4: Find Your Way to the Web

Before you start assembling, Dreamweaver will want you to define your site—a simple matter of telling the program that the new Resume Site folder from Step 1 is the local version of a remote folder—namely, our Web directory or iDisk Sites folder.

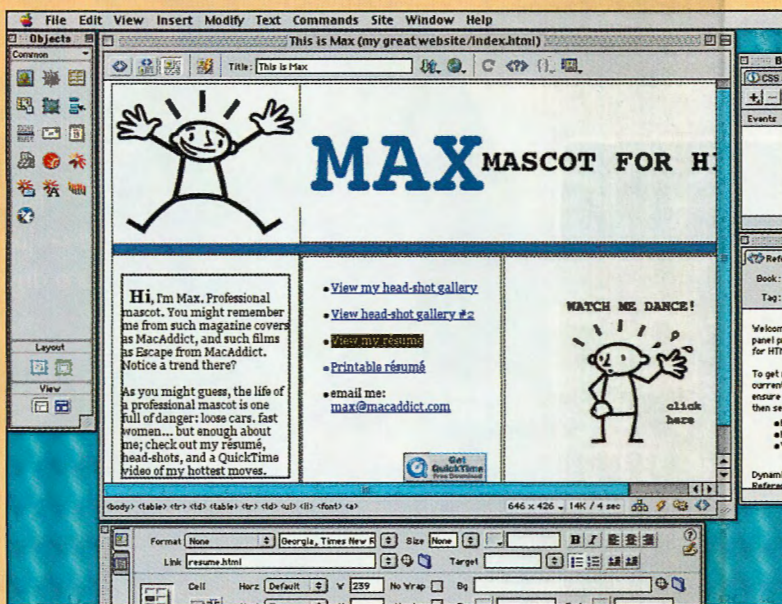
1. Make a new page and save it as index.html in the Resume Site folder.
2. From the Sites menu, select New Site.
3. Under Local Info, navigate to select your Resume Site folder.
4. Under Remote Info, select Local/Network from the Server Access pop-up menu if you're using iDisk space; for regular Web space, use FTP.
5. Under Site Map Layout, navigate to index.html in your Resume Site folder.



Defining the site lets Dreamweaver take over much of the grunt work.

STEP 5: Make the Dang Pages Already

It's finally time to assemble the site, starting with the index page. We want our index page to contain a title graphic, introductory text, links to subindexes and résumés (a designed one and a printer-friendly one), and a QuickTime teaser. Start with a blank table—as you can see in the screenshot to the right, we used a table three rows by three columns, but in the top two rows, we merged the three horizontal cells into one. The blue divider is actually a table cell with background color. We indented the text at lower left by placing it inside its own table, nested within the bottom-left cell of the original table (otherwise the text would be flush with the edges).



TIP

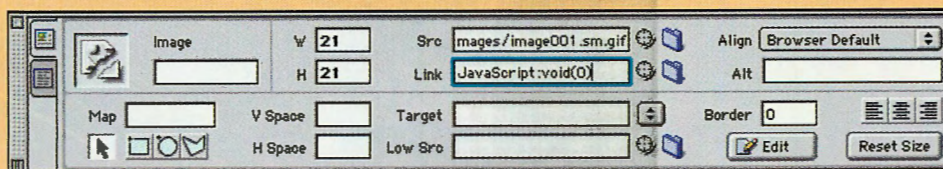
Tables are a great way to create simple art elements in Dreamweaver. For instance, you can play with nested tables, cell-background colors, cell padding, and cell spacing to make stylish borders.

This document looks like one cohesive page but actually contains tables within tables.

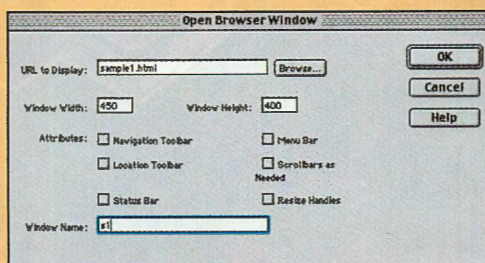
STEP 6: Link It Up

Next you want to create hyperlinks from your index page to all of your subpages. To do this, highlight the words or image you want to link and use the Inspector to type in or navigate to the page that you want the link to go to. To make a link that doesn't go anywhere—say, to make your work samples pop up in their own windows—type `JavaScript:void(0)` into the Inspector's Link box, then go to the Behaviors window's list, select Open Browser Window, and navigate to the page you want as your pop-up window.

Use the Open Browser Window box to make your pop-up windows as svelte or hefty as you want, and give each one a unique name.



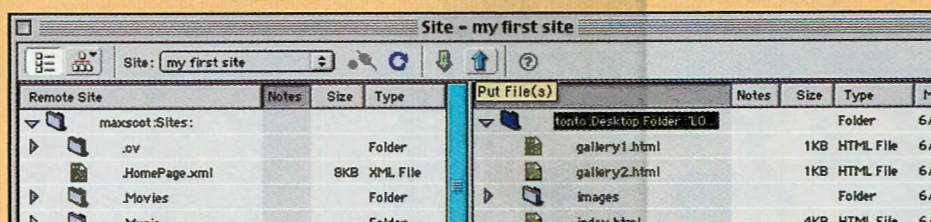
Use the Inspector to type in some JavaScript that opens a pop-up window.



See? Pop-up windows aren't always tools of evil.

STEP 7: Ship 'Em Out

When you're done building and proofing your pages, open the Site window (from the Site menu, select Open Site) to upload the whole shebang to the Web server. Provided you're connected to the Internet and your Remote Info is correct, you can either drag files from one windowpane to the next, or press the little blue Put Files arrow to upload your pages.



Good to go? Open the Site and drag away, or use the upload arrow.

Max would like to remind you that your résumé is serious business—that's why Niko Coucouvanis didn't use his own to demo this article.

TAKE THE DATA AND RUN!

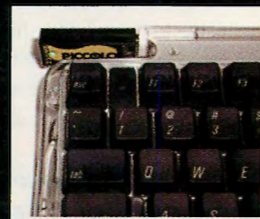


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32
64
128
256

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Question: What has 25 million lines of code, 800 redesigned dialog boxes, 700 Aqua-fied icons, and is about to save Apple's bacon?

Answer: **Microsoft Office v.X for Mac.**

Office Turns

X

It's no exaggeration to say that without a Mac OS X version of Microsoft Office, we're all doomed. With the possible exception of Adobe Photoshop, Office is more crucial to the success of Apple's luscious new operating system than any other application. Without it, Mac OS X won't attract Office's gazillion users—and if Mac OS X stumbles friendless into irrelevancy, the days of Spindler and Amelio will seem a Golden Age by comparison.

Luckily for all of us, this past year has witnessed a whirlwind of creative activity in Redmond and an increased spirit of cooperation in Cupertino (at least regarding Microsoft). The result of this feverish coding campaign will be released sometime this November—and if the copy of the beta we had a chance to poke and prod is any indication, the only turkey you'll need to endure on Thanksgiving is the perpetually desiccated fowl that your sweet Aunt Bea never seems to roast right.

In our first look, Microsoft Office v.X for Mac impresses. It looks, feels, and performs as a Mac OS X application should. Namely, it takes full advantage of such Quartz Drawing Layer niceties as transparency and antialiasing. It exploits the document-specific *sheets* scheme to speed your workflow (sheets are OS X's very accommodating substitute for some dialog boxes). And it employs a veritable Casbah-full of genie effects to help you remember which palette sprang from which toolbar icon. Oh, and since Office v.X requires the speedier version 10.1 of Mac OS X, those genies don't jitter and sputter on a G3-based Mac as they would in Mac OS 10.0.4 and earlier.

Before we show you some of the other goodies in the upcoming Office v.X and how they improve on Office 2001, we'd first like to stop and ask just one simple question: "Hey, Adobe! What's taking you so freakin' long?"

by Rik Myslewski

Word X

Nothing earth-shattering.
Just good design.

Word hasn't changed much, but the few new additions are welcome ones—and in some cases long overdue. The main difference between Word X and Word 2001 is that Word X is more, as they like to say in

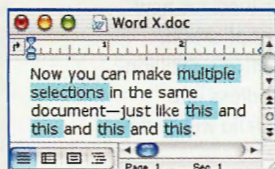
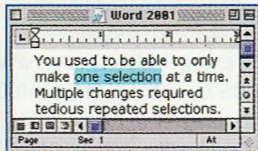
Redmond, “discoverable.” In layperson's terms, that just means it's easier to figure out how to get stuff done. And that's never a bad thing.

What's New

Multiple Selections

It's been a long time coming—Nisus figured out how to accomplish this feat sometime back during the Crimean War—but you can finally perform multiple, noncontiguous selections in Word documents. After making your first selection, simply hold down the Command key and make as many more selections as your little heart desires. After you highlight all the items you want, you can change or format them simultaneously with one command.

Word 2001 doesn't want you to make multiple selections.

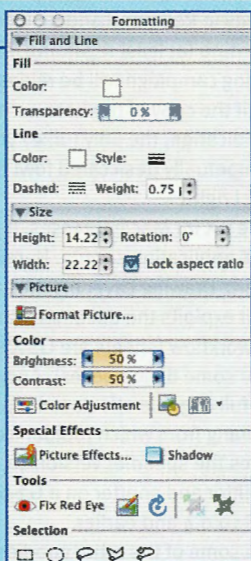


But in Word X, you can select multiple elements by simply holding down the Command key.

Office v.X Tools

Formatting Palette

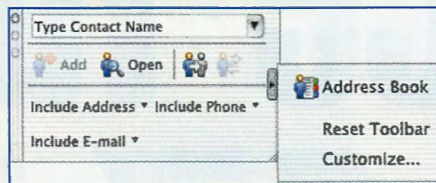
Each Office v.X application offers a beefed-up Formatting palette. The Formatting palette is essentially the same as its equivalent in Office 2001, but now it houses all of the appropriate formatting commands together rather than containing only some and relegating the remainder to separate floating palettes, as Office 2001 does. And yes, the palette is still contextual, and Quartz's power brings greatly improved transparency options.



The Formatting palette (shown here is the Picture palette from Excel) dynamically adjusts to reflect the type of selection you're working on.

Entourage Integration

An improved Contacts toolbar allows tighter integration between Word and Entourage. You can add contacts and full contact information to your Entourage Address Book directly from the toolbar instead of the more cumbersome process of beginning a new contact entry in Word and finishing it in Entourage.



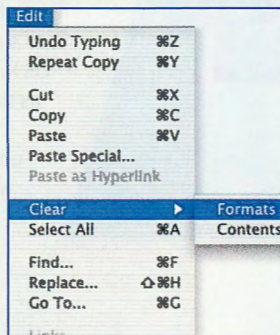
It's now a lot easier to hop back and forth between Word and your Entourage Address Book.

AutoCorrect Improvements

Microsoft has improved Word v.X's AutoCorrect feature. It's not based on a predefined list of common misspellings, as is the case in Office 2001. Instead, it's based on the full faith and credit of the spelling checker's main dictionary, which now contains more and newer words—and you can still add words and phrases. Sadly, though, this version doesn't include any improvements to Word's less-than-adequate thesaurus.

Clear Formats

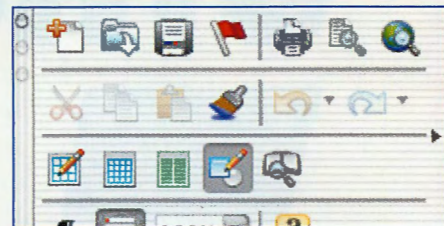
Have you ever made an unreadable mess of a document in an attempt to gussy it up with fancy formatting? Sometimes the best solution is to start over from scratch. In Word 2001, you had to reset your font, paragraph, and document settings individually. In Office v.X, a new Clear Formats command in the Edit menu instantly brings you back to default ground zero.



Want to start formatting from scratch? Select Clear Formats.

Icon Improvements

If you stare at your Mac for hours each day, you know the importance of desktop aesthetics. After all, if elegant design weren't important, we'd all be Windows users, right? Microsoft has gone the extra mile by refining each and every one of Word's command icons to fit in well with Mac OS X's Aqua elegance. The icons aren't revolutionary, they just reflect good, simple design.

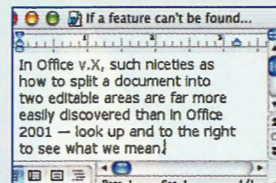
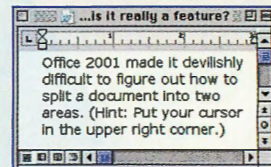


The Standard toolbar in Word X is a great example of clean yet richly detailed icon design.

"Discoverable" Details

Did you know that you can split the document-editing window in Word 2001? You can—but we forgave you if you never figured out how. (Position your cursor above the right scroll bar; once it turns into the splitter icon, click and drag the dark bar that appears.) In Word X, the document-splitting effect is much easier to locate—as are many other tiny and not-so-tiny details.

Word 2001 has many of the same features as Word X, but they're hiding.



Word for Office v.X makes previously hidden features such as the window splitter easier to find.

Word X

- ✓ Best new feature: Multiple selections
- ✓ Overall upgrade: Minimal
- ✓ Biggest disappointment: Same old lousy thesaurus.

Excel X

Pretty—and pretty darn powerful.

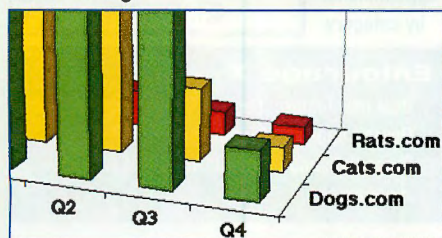
Excel X benefits greatly from Mac OS X's Quartz Drawing Layer. Charts now take advantage of Quartz's antialiasing wizardry, which smoothes curves and diagonal lines. Because of antialiasing's extra line-smoothing pixels, charts no longer require cut-and-paste treatment in Photoshop before they are worthy of use in a

presentation. In addition, Quartz's transparency function now makes it possible to create effective 3D charts. Other welcome additions include AutoRecover crash recovery (finally!) and customizable keyboard shortcuts for all of you who grumbled about Excel 2001's shortcut combinations.

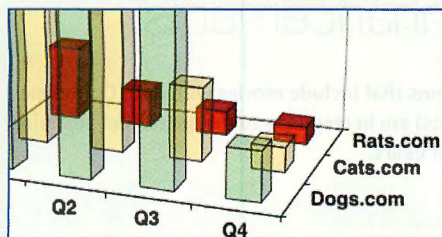
What's New

Transparency

The Quartz Drawing Layer allows you to control the transparency level of practically any 2D surface in Excel X. This can be especially useful for creating 3D column, line, and pie charts, since you can see *through* chart elements that would otherwise obscure other elements. You can access this feature by pressing the Fill Effects button in the Patterns tab, located inside the Format Data Series dialog.



Office 2001 lacks transparency, making it impossible to see how awful Rats.com performed.



But when you use Excel X's transparency control, the other 3D columns don't obscure the Rats.com data.

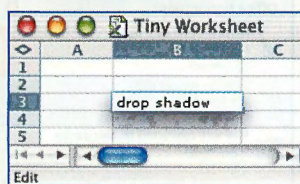
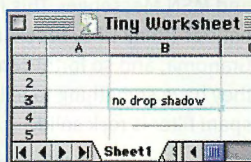
REALbasic Integration

Office v.X now offers integration with REALbasic, a relatively easy-to-use programming language for controlling many aspects of Office v.X applications. REALbasic's complex number-crunching and information-management capabilities lend themselves well to Excel X. Microsoft also promises that the transition from Virtual Basic for Applications (VBA) will be straightforward. It'll also be worth the effort, since REALbasic, which has a built-in compiler that creates fast-running, processor-readable code, should run much quicker than VBA, which uses the slower line-by-line code-interpretation scheme.

Drop-Shadow Cell Editing

Excel X frames the cell in which you are entering text with a subtle drop shadow—another example of the many small touches that make finding your way around Office v.X a bit easier.

A selected cell and one into which you're entering text look the same in Excel 2001.



Begin entering text in a cell in Excel X, and it pops up off the sheet, casting a shadow.

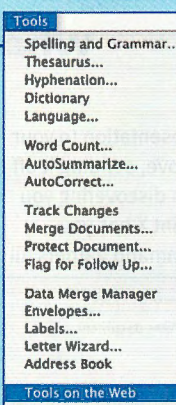
Keyboard Customization

Excel X now makes it possible for you to assign your favorite key combinations to a wide variety of commands. Rest assured: The Customize Keyboard dialog will also warn you if your chosen combination already belongs to another command.

Office v.X Tools

Tools on the Web

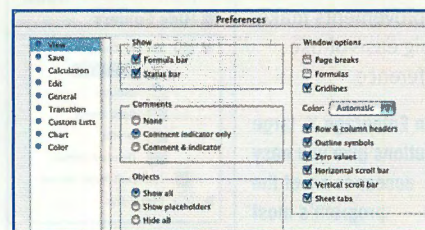
Microsoft is promising a greatly enhanced Web-based support effort for Office v.X for Mac. Each Office application's Tools menu includes a Tools on the Web command, which, when chosen, will whisk you off to the Microsoft Office Web site, where you will be treated to the latest and greatest tips, tricks, templates, and tasty productivity morsels from the best and the brightest of the Microsoft Office community. Sounds like a good idea—but we'll reserve judgment until we see if substance outweighs hype.



All four Office v.X applications have a Tools on the Web command that links to online extras.

Improved Preferences Dialog

It may seem like a little thing, but Excel X has gotten rid of the frustrating tab metaphor in its Preferences dialog. You'll no longer find yourself searching for the correct tab when one row of tabs decides to switch places with the other. In addition, the Preferences dialog now includes a Save selection, which brings up a dialog where you can set the frequency of the new AutoRecover feature.

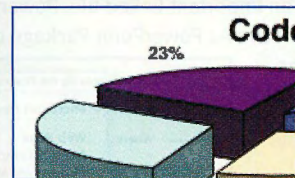
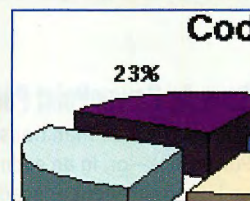


The Preferences box is simpler, cleaner, and—like many features of Office v.X—more intuitive.

Antialiased Charts

All of Excel's charting functionality—including pies, doughnuts, bubbles, and everything in between—benefits greatly from the built-in antialiasing in Mac OS X's Quartz Drawing Layer. Curved lines are smooth, and diagonal lines are free of jaggies.

Pies baked in Excel 2001 look amateurish and lumpy—unappetizing at best.



In Excel X, you can make a pie that looks smooth enough to eat.

Excel X

- ✓ Best new feature: Quartz-based enhancements
- ✓ Overall upgrade: Significant
- ✓ Biggest disappointment: Chart-element selection still iffy

Entourage X

A full-featured work center.

Entourage gets a thorough once-over in Office v.X for Mac. Among many other improvements, it allows you to embed sounds and movies directly into email messages; cut items from any other Office app and paste them into an Entourage item without losing any formatting; and navigate much more easily through a redesigned—and much better

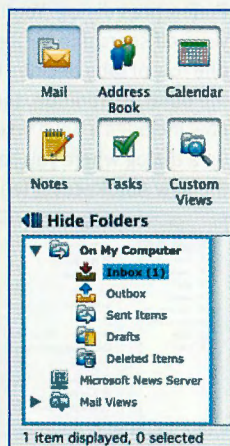
looking—main window and calendar view; set your Address Book to format international addresses correctly; and have Entourage automatically adjust all the appropriate appointments in your Calendar as you travel from one time zone to another. Nice job.

What's New

Redesigned Navigation

In Entourage X, the main window arranges buttons and folders more logically than it did in Entourage 2001. It groups six of the most important functions together in two rows of buttons, and relegates folder navigation to a separate window. As is the case with so much in Office v.X, these little improvements make a big ease-of-use difference.

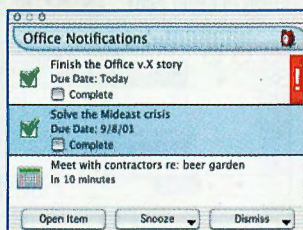
In Entourage X, large buttons give you easy access to six of the program's most important functions.



Office Notifications

The new Office Notifications miniapp is more powerful than Entourage 2001's simple Reminder. Not only does it keep you up to date on all your tasks and appointment reminders, but also it's ready to accept notifications from Microsoft's soon-to-be-launched .NET service and MSN Messenger. This means outside entities (think UPS, FedEx, news services, Grandma, and so forth) can notify you when they have something to tell you. Let's hope the spam filter is rock solid.

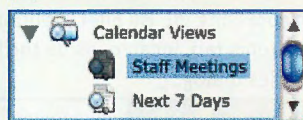
Office Notifications is pretty straightforward, but Microsoft has ambitious plans for the app's future.



Categories and Custom Views

Sure, Entourage 2001 already has both Categories and Custom Views, but Entourage X finally makes setting them up worth the effort. Categories are as simple to define and assign as before, but now an easier-to-manage Custom Views scheme makes filtering mail, contacts, notes, tasks, and even Calendar entries much simpler, more powerful, and easier to organize.

Custom Views let you display appointments by category.



Entourage X

- ✓ Best new feature: Custom Views enhancements
- ✓ Overall upgrade: Significant
- ✓ Biggest disappointment: Nothing worth mentioning

PowerPoint X

Tweaks and enhancements.

In addition to a complete Aqua makeover, PowerPoint receives a few Office v.X refinements, some of which (like transparencies and layers) owe thanks to the Quartz Drawing Layer. Others (for example, the

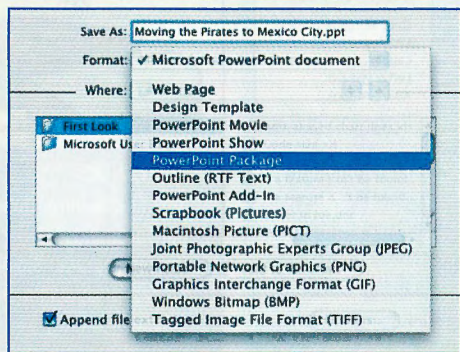
ability to save presentations that include movies with both QuickTime transitions and animations) are in response to the successful pestering of determined PowerPoint users.

What's New

Save As PowerPoint Package

Nothing's worse than transferring a PowerPoint presentation to your PowerBook—or, in an even more career-limiting move, sending it off to an important client or academic honcho—and then discovering you forgot to include an important linked file. PowerPoint X has you covered: The new Save As PowerPoint Package command gathers all the necessary files and places them into one folder. Your career—or your degree—is safe.

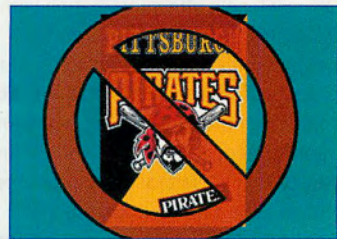
The new Save As PowerPoint Package option creates a folder containing all the files to which your presentation links.



Transparency Capabilities

PowerPoint has always aspired to be a full-scale graphics application—and with Office v.X's integration of the Quartz Drawing Layer, the app is a few steps closer to being ready for prime time. Transparency, antialiasing, and layering options, among other Quartz-generated capabilities, allow you to create PowerPoint slides with more detail than ever before.

A gentle transparency effect takes some of the pain out of being a Pittsburgh Pirates fan.



PowerPoint X

- ✓ Best new feature: Save As PowerPoint Package
- ✓ Overall upgrade: Minimal
- ✓ Biggest disappointment: No new or improved presentation templates

Coming to newsstands. The Ultimate Mac Buyer's Guide

a special issue from MacAddict magazine.

Over 100 Hot Mac Goodies from the Experts at MacAddict

The MacAddict Ultimate Buyers' Guide

**Gear, Gadgets,
& Goodies**
for the
**Complete
Mac Fanatic**

The Digital Lifestyle

Make your Mac the hub
of your digital experience

Shopping Secrets

Cut through hype and
decode tech jargon

Time-Saving Tips

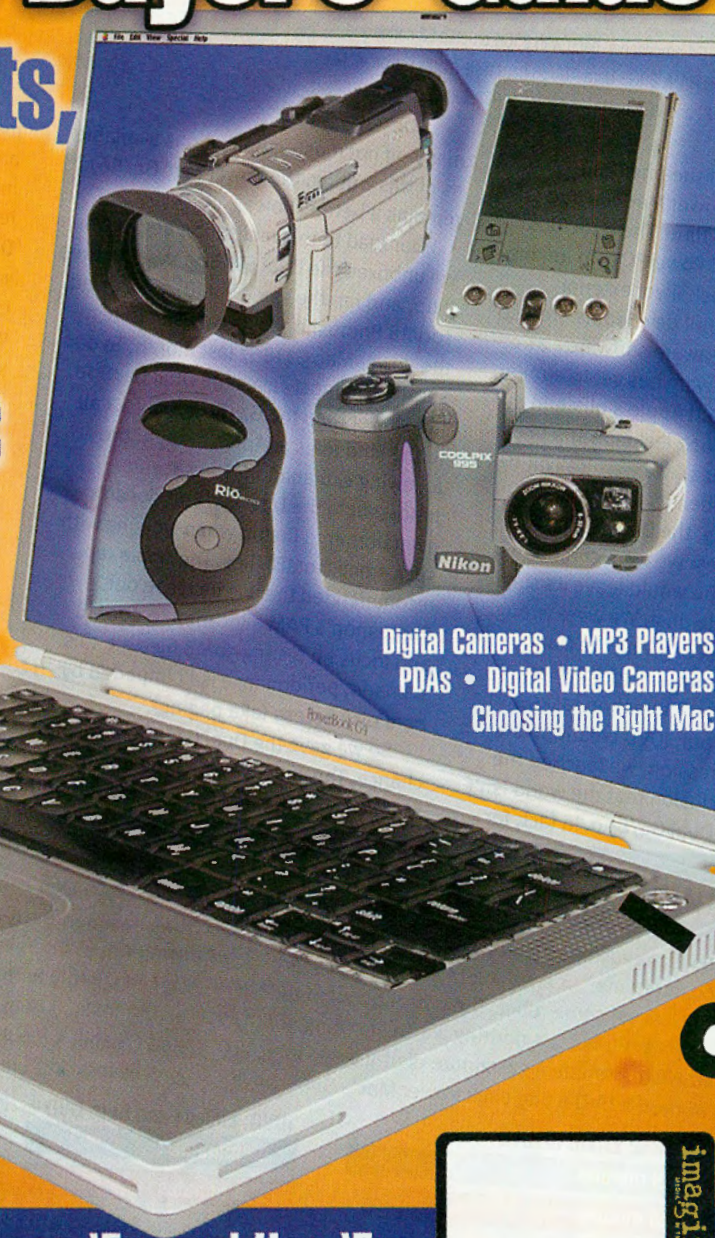
We'll show you how to
become an instant expert

Personal Shopper

The products that fit
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How to Choose 'Em and Use 'Em



Available only on
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Comes with
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stuffed with
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demos, tips,
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reviews

We roll two 7s and two 800s.

Dual-Processor Power Mac G4 800MHz

hardware

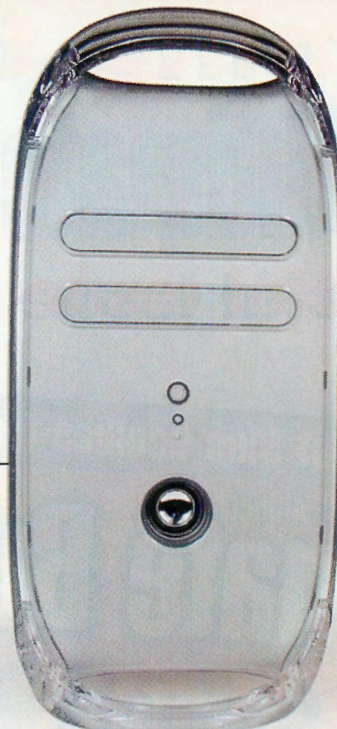
Company: Apple

Contact: 800-692-7753, www.apple.com

Price: \$3,499

Specs: Dual 800MHz PowerPC G4 processors, each with 256K on-chip L2 cache and 2MB backside L3 cache, 256MB RAM, 80GB Ultra ATA/66 hard disk, nVidia GeForce2 MX TwinView graphics card with ADC and VGA ports, four 33MHz PCI slots, SuperDrive

Double the power
doesn't mean double
the performance.



PHOTOGRAPH BY W. B. JONES



FREAKIN' AWESOME!
The most valuable products, the coolest gizmos.



SPIFFY
A solid offering. Overall a good investment.



YEAH, WHATEVER
Neither recommended nor rejected. Some might like this, but we weren't impressed.



BLECHI
Give us back the time we spent testing this.

Apple's top-of-the-line Dual-processor Power Mac G4/800 is ahead of its time. The ferocious power of that second PowerPC chip lurking under the stylish QuickSilver exterior remains untapped until developers step up with multiprocessor-aware software—as of press time, that software has yet to appear.

After having tested Apple's blisteringly fast Power Mac G4/867 last month (*Reviews*, Oct/01, p44), we were salivating with anticipation when its thousand-dollars-more sibling, the Dual G4/800, arrived in our offices. We were certain that this muscle machine would leave its single-processor bro in the dust. We were wrong.

After a full week of giving the Dual G4/800 every opportunity to shine on processor-intensive Photoshop tasks and filters, iMovie output, iDVD creation, and QuickTime compression, we reached the inescapable conclusion that the world isn't yet ready for the Dual G4/800. In fact, for

many—if not most—applications available as of this writing, the Power Mac G4/867 remains a better choice.

Our road to this realization began when we unboxed the Dual G4/800 system, fired it up, and ran the same 10MB, 50MB, and 100MB Photoshop tests we used to test the Power Mac G4/867 last month. To our surprise, in most cases the Dual G4/800 ran slower than the G4/867. A quick call to the kind folks at Apple brought the following explanation: The second processor in the Dual G4/800 doesn't even bother to fire up when working with such small (10MB) files. The Apple rep recommended that we increase our Photoshop's RAM allocation to 200MB and focus on testing 50MB files—in this scenario, performance isn't impeded by hard disk access (aka paging).

So we gave the Dual G4/800 a second chance. This time we also fired up an identically configured G4/867, loaded both

machines with exactly the same test files, and let them compete head-to-head, *mano a mano*, may the best Mac win. Our Photoshop test results (see "Photoshop Testing: Dual Disappointment," p47) show that when working with 50MB files, the race was essentially a draw. The only hands-down victory posted by the Dual G4/800 system was when we applied the Dust and Scratches filter with an 8-pixel radius—a test expressly suggested by our Apple buddies.

When working with a 100MB file and the same Photoshop setup, the Dual G4/800 took it on the chin. During these tests, Photoshop spent a lot of time and energy swapping file information back and forth to the systems' hard disks—unlike in the 50MB tests, where most of the action remained in RAM. Surprisingly, the G4/867 system consistently held a clear lead over the Dual G4/800 machine. Although both Power Macs have 7200 RPM ATA hard disks, a little poking around in the Apple System Profiler

Video Testing: Welcome Improvement

Digital video is greedy. It consumes lots of processor power, disk space, and time, so anything that can help speed video processing is a welcome relief. The power boost of the Dual G4/800 helps a bit, but it's nothing worth shouting about.

We used iMovie to prepare a 56-minute digital video for iDVD, encoded and burned a DVD using each Power Mac's SuperDrive,

then encoded 9.5 minutes of the same video for Web streaming using Terran Interactive's Cleaner 5. Although the Dual G4/800 lagged slightly behind the Power Mac G4/867 in our iMovie-export tests, it beat the single-processor system in both the iDVD and Cleaner 5 tests by approximately 20 percent. Apparently, two processors don't make a Mac twice as fast. Bummer.

	iMovie: Export to iDVD	iDVD: Encode and Burn DVD	Cleaner 5: Encode for Web
Dual G4/800	49 minutes	93 minutes	36 minutes
G4/867	46 minutes	114 minutes	43 minutes

Shorter is better. Time in minutes. Both the Dual G4/800 and G4/867 Power Macs we used in these tests were running Mac OS 9.2.1 and had 256MB of SDRAM. The test video had no transitions, dissolves, or other effects. We used iMovie, iDVD, and Cleaner 5 with their default RAM allocations of 29.2MB, 58.7MB, and 41.8MB, respectively, and performed each test once on each system.

Photoshop Testing: Dual Disappointment

A Power Mac G4 with two processors should easily wipe the floor with a single-processor system when running Photoshop tasks, right? You might assume so, but our testing shows you'd be wrong.

At least for now. When we get our hands on Mac OS 10.1 and a Mac OS X-compatible version of Photoshop, we'll convene for another contest between Apple's two most powerful Power Macs—but until

then, the Dual G4/800 holds only a negligible lead over the single-processor G4/867 when running Photoshop tasks within the system's RAM. More surprisingly, the Dual G4/800 system suffers a humiliating whuppin' when running Photoshop tests that require serious disk thrashing—such as working with a 100MB file in a 200MB RAM-allotted Photoshop program.

50MB FILE TEST			
	Rotate File: 1 Degree	Gaussian Blur: 5 Pixels	Unsharp Mask: 50 Percent
Dual G4/800	5.9 seconds	4.7 seconds	6.3 seconds
G4/867	5.1 seconds	4.8 seconds	6.4 seconds
	Gaussian Blur: 1 Pixel	Resize: 25 Percent	Dust and Scratches: 8 Pixels
Dual G4/800	1.6 seconds	1.8 seconds	13.9 seconds
G4/867	1.7 seconds	1.9 seconds	24.2 seconds
100MB FILE TEST			
	Rotate File: 1 Degree	Gaussian Blur: 5 Pixels	Unsharp Mask: 50 Percent
Dual G4/800	34.6 seconds	39.2 seconds	42.3 seconds
G4/867	19.3 seconds	26.9 seconds	30.6 seconds

Shorter is better. Time in seconds. Both the Dual G4/800 and G4/867 Power Macs we used in these tests were running Mac OS 9.2.1 and had 256MB of SDRAM. We used Photoshop 6.0 with a RAM allocation of 200MB for all tests. We ran each test five times, quitting and relaunching Photoshop between each iteration. The average of those five iterations is shown here. After reviewing our test results, an Apple spokesperson suggested that, when running Mac OS 9.2.1, a larger Photoshop RAM allotment should significantly increase performance.

showed that the G4/867 system's drive was manufactured by IBM, and the Dual G4/800's by Western Digital. Perhaps IBM makes a snappier drive? Dunno.

At this point, we decided that a full and fair test of the two machines' Photoshop performance would have to wait until the release of a full and fair version of Photoshop for Mac OS X. Since Adobe hasn't announced when that will be, we'll wait—and don't worry, we'll run the same tests as soon as we get the software and then tell you whether the Dual G4/800's Photoshop performance justifies its princely price.

Leaving Adobe aside, we tested the two Power Macs on Apple software—iMovie and iDVD—and on Terran Interactive's Cleaner 5, a digital video tool that we know takes advantage of multiprocessing. Here, the results were more encouraging. Although the time it took for each system to export a 56-minute video into the iDVD format was essentially identical, the Dual G4/800 was nearly 20 percent faster than the G4/867 when encoding and burning a DVD on its SuperDrive and when using Cleaner 5 to encode a 9.5-minute video for Web streaming. Not an earth-

shaking performance improvement, but both noticeable and welcome.

OK, so the Dual G4/800 doesn't completely bury the competition. It's still one spiffy machine. For example, its SuperDrive seemingly can do everything except promote Bosnian tourism: It writes DVD-R discs at 2X, reads DVDs at 4X, writes CD-R discs at 8X, writes CD-RW discs at 4X, and reads CDs at 24X—and, of course, it plays commercially available and home-burned DVDs and CDs. Sure, it can be a trifle noisy—as is the Power Mac's hefty fan—but it wasn't so loud that we found it an annoyance.

The Dual G4/800's nVidia GeForce2 MX TwinView is a boon to graphics professionals. Hook up one of Apple's LCD monitors to the TwinView's ADC port and that quality CRT monitor you have lying around to its VGA port, and you have the dual-monitor setup that all graphic mavens desire: one display for your work, another for all those tool palettes. And, since the TwinView lives in the motherboard's AGP slot, you have four high-speed PCI slots to stuff full of other goodies.

There's also room for 1.5GB of PC133 SDRAM—and we suggest that you stuff those

DIMM slots with as much RAM as you can afford. RAM's cheap these days and our tests proved that the more RAM you have, the less performance you'll lose to hard disk access.

Other specs are what you'd expect from a high-end Power Mac: 10/100/1000Base-T Ethernet, two USB and two FireWire ports, a 56-Kbps V.90 internal modem, two unoccupied 3.5-inch drive bays, and one bay nestled beneath the SuperDrive into which you can stuff your removable-media drive of choice.

All-in-all, the Dual-processor Power Mac G4/800 is a fine machine. The only reason we hesitate to recommend it wholeheartedly is that its time has not yet come—its hefty \$1,000 surcharge currently doesn't buy you \$1,000 worth of extra performance. As it so often does, Apple is challenging the developer community to take advantage of the power it's offering them. C'mon, guys—get off the dime and make this mutha scream.

—Rik Myslewski

good news: Dual processors are ready for the future. Versatile SuperDrive.
bad news: Second processor is often just expensive, dead weight.



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design & graphics

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Epson Stylus Photo 785EPX p57

Suitcase 10

utilities

Company: Extensis

Contact: 800-796-9798, www.extensis.com

Price: \$99.95 (SRP), \$49.95 upgrade

Requirements: Power Mac, Mac OS 8.6–9.1, 32MB RAM, 10MB free hard disk space, CD-ROM drive



Find a demo of Suitcase 10 on The Disc.

You know who you are—you horde your fonts, saving each one in the System Folder for imminent future use, knowing someday that Bajoran font is going to come in handy for your next Trekker party invite. However, gang-loading fonts in your operating system seriously impacts your Mac's performance. That's where Extensis's font-management program, Suitcase 10, comes into play. With much-needed new features, such as font autoactivation and corrupt-font detection, Suitcase 10 can be a lifesaver for font fanatics.

Suitcase works by loading seldom-used fonts into the Mac OS only when you need them—and unloading them when you don't—so they don't bog down your Mac the rest of the time. Version 10 really rocks

Wonder Twin Powers, Activate!

The best new feature in Suitcase 10 is its ability to autoactivate fonts on a per-document basis. Just use a Suitcase-stored font in a document—the next time you launch that file, Suitcase will activate the needed fonts quickly and transparently (unlike Suitcase 9, which required you to activate disabled fonts manually for each project).

Unfortunately, at press time this much-needed feature only supported a handful of applications, including Microsoft Office, QuarkXPress, and Macromedia FreeHand. Suitcase does let you create autoactivation sets for other programs, such as Photoshop, but these sets are keyed to the *program*, not the *document*. In other words, if you use 20 Suitcase fonts in a single Photoshop document, those fonts will activate every time you open Photoshop.

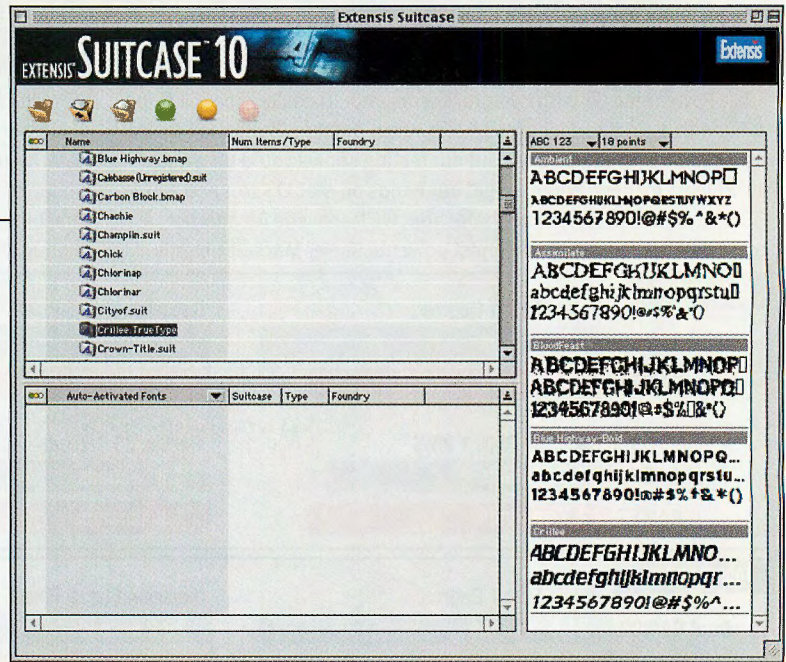
because, unlike prior versions, it can load specific fonts automatically, and only when you open the document that calls for them—no more launching Suitcase just to load a font. Unfortunately, this wonderful feature is limited to a small number of supported apps (see “Wonder Twin Powers, Activate!”, left).

One thing that hasn't changed is Suitcase's efficient interface: a single, three-paneled window provides customizable views of fonts and font sets, as well as a multitude of font-preview display options. All the interface lacks are savable, custom preview sets.

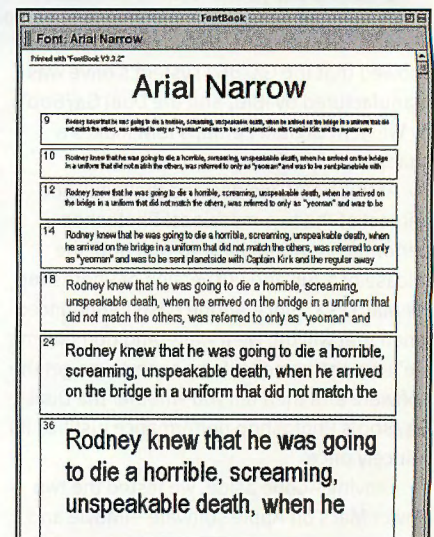
If you have hundreds of fonts, you can save a lot of time by printing them all into a quick reference book. FontBook, a bundled companion program new to Suitcase 10, displays fonts in 24 different professional formats, which facilitates the process greatly. This application may look familiar to many Mac folks—it's a shareware program from Lemke Software, the maker of GraphicConverter.

Also new is a Control Strip module and Contextual Menu support, both capable of launching the Suitcase application or loading fonts by activating predefined font sets. These are especially handy when you're dealing with applications that don't support Suitcase 10's on-demand font loading.

Satisfying our major beef with Suitcase 9 (*Reviews*, Oct./00, p63), Suitcase 10 can identify corrupted font files after a system crash, helping you isolate and replace bad fonts.



Suitcase displays a clear list of available fonts and font sets as well as customizable views of what selected fonts look like.



The included FontBook provides printable previews for your fonts.

At press time, Extensis was developing a Mac OS X version. Aside from the fact that autoactivation doesn't work with all programs, the only other gripe we have with Suitcase is the Windows-like interface of the online help. Still, if you're juggling fonts, Suitcase 10 will help organize them for utmost efficiency, freeing you and your Mac to concentrate on real work.

—Mark D. Shuchat-Marx

good news: Autoactivates fonts transparently, without launching Suitcase. Great previews. **bad news:** Autoactivation doesn't work with all programs. Windows-like help interface.



SoundLink

hardware

Company: U.S. Robotics

Contact: 877-710-0884, www.usrobotics.com

Price: \$104 (SRP)

Requirements: Any Mac with a 1/8-inch audio output

Like a musical walkie-talkie, SoundLink transmits Mac-based MP3s to any stereo or radio.



PHOTOGRAPH BY W. B. JONES

Playing your MP3s through teeny and tinny computer speakers, or built-in iBook or TiBook speakers, doesn't do the songs justice. While a good set of headphones does, you're a strange sight to coworkers who witness you shaking your booty to a silent soundtrack. Thanks to the SoundLink system, they can now partake in your rug cutting.

SoundLink is a wireless audio system that transmits music from your Mac to any stereo system or radio. Just connect the transmitter to your Mac's audio-out port with the included stereo 1/8-inch cable, connect the receiver to any audio-in port on

your stereo system with the included stereo RCA cable or tune your radio's FM receiver to either 88.1 or 88.3, and fire up your MP3 playlist. The system is powered by two included AC adapters or by batteries (each unit takes four AAAs).

Though it was easy to hook up the system, SoundLink throws a hissy fit that one-ups our cat's—white noise took over between songs. Even after toggling between SoundLink's four available channels, we still heard hissing; the noise is tolerable over most music, but disturbingly loud when the music stops. We transmitted the signal to our FM radio but received a

buzzing interference. (We should note that we tested the device near an airport, so the noise could be incidental.)

When we took our iBook and transmitter for a walk, the receiver never lost the signal no matter where we went (SoundLink claims a transmission range up to 1,000 feet). Though the hiss is a nuisance, SoundLink sure beats having to burn MP3s to CD just to play them on the stereo.—Kris Fong

good news: Good transmission range. Beats burning MP3s to CD.
bad news: Noisy.



Reality Audio

Award-winning audio technology for your Mac from the company music professionals trust: M-Audio.



Computer Music Magazine

says of the Audiophile:
"How does it sound?
Well, in a word, stunning."



Music professionals are uncompromising when it comes to the fidelity and performance of their soundcards. They don't just demand the best; they demand reality.

Now with the Audiophile 2496 you can have that same level of performance in all of your multimedia applications: from hi-fidelity MP3 and internet audio to 24-bit audio recording, vinyl transfers, and even DVDs. If you demand professional quality audio, it's time to get real. Discover what the Audiophile 2496 can do for you. For more information go to www.m-audio.com/macaddict

Available at
apple.com
go to Store > Accessories > Music

Painter 7

design & graphics

Company: Procreate

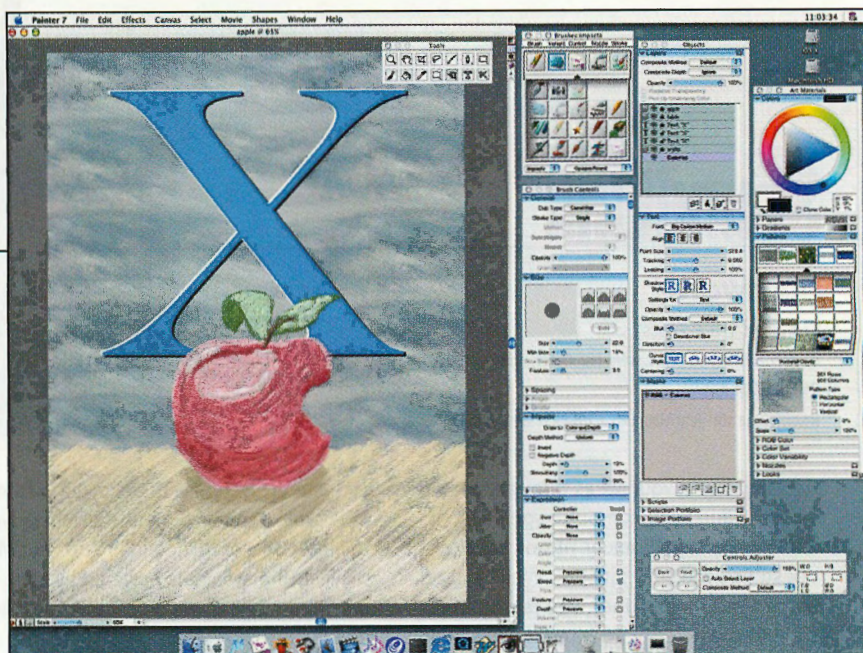
Contact: 800-772-6735, www.procreate.com

Price: \$479 (SRP), \$199 upgrade

Requirements: G3 or faster, Mac OS 8.6 or later, 64MB RAM (128MB RAM for Mac OS X), 600MB free hard disk space, 24-bit color display, CD-ROM drive, graphics tablet recommended

If you know Painter, the first thing you'll notice about version 7 is that it no longer comes in a paint can. Don't worry, that's the only thing you'll miss. This is the first full release since Painter found a new home at Procreate (a subsidiary of Corel), and—based on Painter 7's evolved feature set, its deft handling of Layers, and its nearly seamless migration to OS X—Procreate provides a happy home indeed.

For those new to the world of digital art, Painter is a graphics application that brings organic tools (such as paper, inks, and paints) to digital artists. Painter emulates natural media (oil and watercolor paints, pastels, pencils, and markers) as well as the different types, weights, and thicknesses of paper used by traditional



Wet-media digital art, now with protected memory and a lickable Aqua-esque interface!

artists. When you get down to painting, your chosen media interact as they would in the real world. Newbies often compare Painter and Adobe Photoshop, as in "Which one should I buy?" But these two applications complement each other wonderfully for mixing photography with more freeform, painterly art—and yes, Painter fully supports opening and saving layered Photoshop files.

Perhaps one of the most important new features is Painter's ability to run natively in Mac OS X—no Classic mode required. Now you can reap all the benefits of Apple's state-

of-the-art operating system while honing your fine-art skills. There's just one drawback: Mac OS X currently lacks Wacom tablet support. Anyone who has used Painter will agree that drawing in the program without a tablet is like sketching with a brick. By the time you read this, we hope that Wacom tablets and Mac OS X will be running happily together under Mac OS 10.1.

Painter installed smoothly in both Mac OS 9.1 and Mac OS 10.0.4, but it felt a little slower in the Mac OS X partition. Again, we hope that Mac OS 10.1 makes everything

Digital Watercolors Rock!

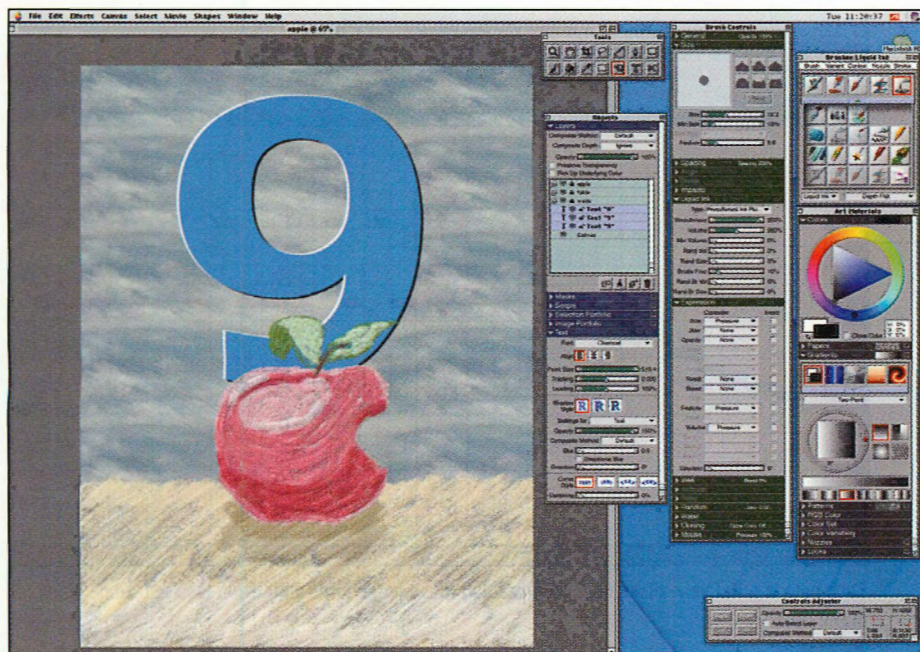
Painting with watercolors is a tricky business. The angle of the paper, brush size and density, and ratio of water to pigment are just a few of the things that dictate how the final brush strokes look. Painter 7's watercolor-emulation tools are vastly improved, and allow digital painters the freedom of playing with traditional watercolor technique while employing the digital tricks of the trade. This boils down to dynamic control over properties like gauge and paper wetness, evaporation rate, and (of course) brush types and pigment density.

Painter's new Water Color technology keeps the main Canvas layer clean by confining watercolor strokes to special Water Color layers, giving you the freedom to experiment and create different versions of an image without mucking up the whole project. You can manage Water Color layers just like standard layers (for example, you can change visibility, stack order, opacity, and so on) in the Layers pane of the Objects palette.

The coolest thing about painting with digital watercolors is not that you can brush a stroke across a tablet and watch the colors run and bleed. It's not even that you have over 40 watercolor brushes at your fingertips. It's that you can paint a few strokes of a color to see how it looks and simply press Command-Z to undo it. How many times have you wanted to do that in the real world?



Hold your water! Painter's new Water Color layers let you hone your watercolor technique without the traditional mess.



No X, no problem; Painter still runs on Mac OS 8.6 through 9.x

zipper and fixes a couple Mac OS X-specific Painter quirks, such as the random screen-redraw lag and application freezes (not full-system freezes) we experienced when we used Dynamic Plugins.

Painter has always been the tool of choice for creating digital art with the look of watercolor, oil, and other traditional media, and version 7 takes the quality of emulation to new heights. Procreate's two new wet-media technologies, Liquid Ink and Water Color, improve the look and feel of wet media in the digital realm; both require Painter's new wet-media layers, but you can convert this type of layer to a standard one if you need to apply other effects (say, one of the included KPT5 filters). Once you convert a Liquid Ink or Water Color layer, though, you can't add more wet media to that layer.

Liquid Ink brings the feel of thick, wet paint—where adjacent colors bleed and run

together—to computer-based painting. Painter offers over 40 Liquid Ink brushes—and in addition to having the usual control over size, pressure, opacity, and so on, you can use positive or negative (resistive) variations. The latter are useful for carving away or removing swaths of Liquid Ink rather than simply erasing them, so that what remains still looks painted, instead of looking, well, erased—try doing that with *real* oil paint.

The new Water Color technology (see "Digital Watercolors Rock!", p50) is even more exciting and fun to watch. Watercolor brush strokes run and merge, altering color as they bleed into each other. In our testing, these brushes worked well for the most part, but noticeably lagged when we used larger brushes. Although this could become a drag when filling in an entire background, there are easier ways of applying color to large areas.

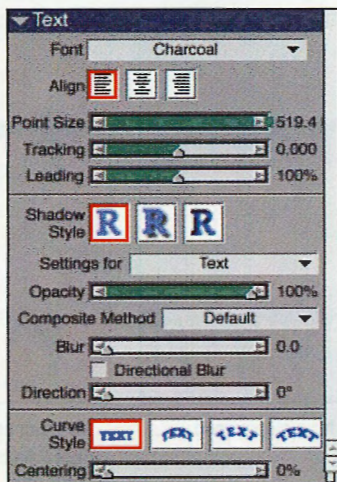
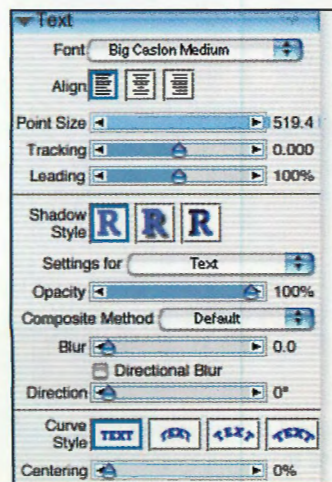


Thanks to Perspective Grids, you determine where the horizon falls.

Painter also offers improved text handling in this version—text remains vector based for editing until you convert the text layer to a standard layer. The Text tool's controls and dynamic text features are now located in a single (Text) pane inside the Objects palette; similarly, Painter's Brush Controls and Art Materials palettes are now modular, and you can hide and select palette sections and shuffle them up and down. Another handy addition to the interface is a real-time zoom tool, in the form of a variable slider at the bottom-left corner of document windows.

Those who sketch freehand will find the new Perspective Grids a welcome addition. After you switch on grid view (choose Show Grid under Perspective Grids in the Canvas pull-down menu), the Tools palette's grabber hand is replaced by the Perspective Grid Adjuster, which you can use to adjust the grid's horizontal and vertical vanishing points to reflect your desired perspective. Besides looking cool, Perspective Grids are an enormous aid to accurate 3D drawing.

When MetaCreations announced its restructuring and Painter's fate was unknown, more than a few digital artists held their breath. Thanks to Procreate (and Corel), Painter's migration to OS X, and the application's slick new features, digital painters can relax and get back to being creative with an exciting new version of a favorite tool.—Mike Caputo



Painter's multiple palettes are completely configurizable in Mac OS 9 and OS X (and yes, that's a word—Steve Jobs said so).

good news: Natural-media painting for OS X. Improved watercolor emulation and text handling. Variable zoom. Liquid Ink blending. Perspective grids. **bad news:** OS X version lacks tablet support.



ReCycle 2.0

audio

Company: Propellerhead Software

Contact: www.propellerheads.se

Price: \$179 (SRP)

Requirements: Power Mac, Mac OS 8.6 or later, 16MB RAM, CD-ROM drive

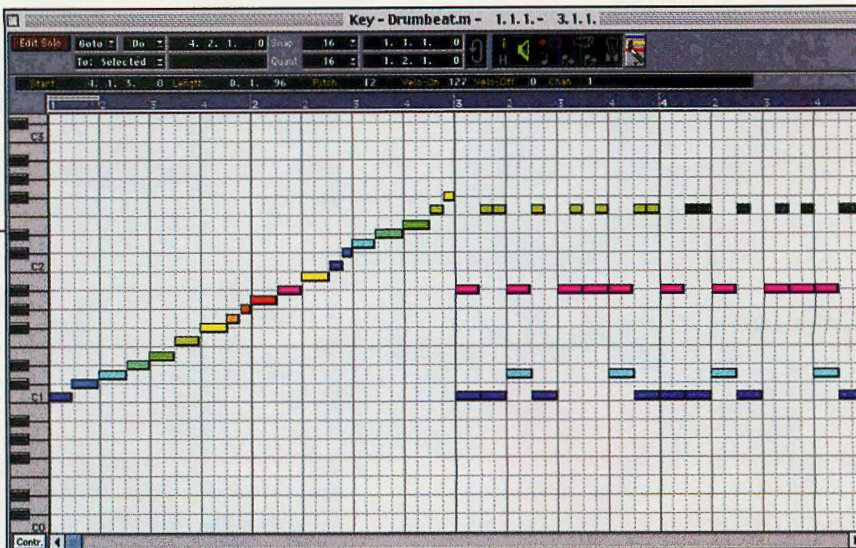


Find a demo of ReCycle 2.0 on The Disc.

To the uninitiated, ReCycle may seem like a costly one-trick pony, but any musician or producer who works with drum loops will tell you it's an indispensable utility. Version 2.0 includes stereo support, real-time effects, and other loop-taming tricks—making ReCycle as simple or as involved as you need.

ReCycle is not a music-creation tool, it's a utility to use in conjunction with a digital audio program or a MIDI sequencer, such as Cubase VST or Propellerhead's Reason. ReCycle converts fixed-tempo loops into the versatile, editable REX2 format, ultimately giving you more artistic possibilities for your productions.

Loops, as the name suggests, are chunks of audio that play over and over continuously. Drum patterns are a popular type of loop (and incidentally, they happen to be ReCycle's specialty), but adding one to a song requires that the loop's tempo perfectly match the song's. Without ReCycle, adjusting a loop's tempo also adjusts its speed, thus altering the pitch. ReCycle slices a drum loop into



Each note is a ReCycle-sliced beat. Rearranging these notes turns your drum loop into something brand new.

individual beats (see "Chop, Chop!", below), creating a REX2 file that allows you to change the loop's tempo without affecting the pitch (or change its pitch without affecting the tempo).

Simplicity is great, but without manual control, the program would be useless to musicians who really dig into their loops. ReCycle has that control, which is especially important for complex loops, where the program often misses slice points. For example, we fed ReCycle a typically fast and busy drum 'n' bass pattern. ReCycle inserted more slice points than it could play back smoothly, but after we manually deleted a couple of slice points, the pattern sounded much more coherent.

If you have a sampler (a hardware or software device that records and plays back audio via keyboard or MIDI sequencer), you have an even broader level

of customizability. ReCycle can transfer the slices of a loop to the sampler, along with a corresponding MIDI file to your sequencer—this effectively lets you not only adjust the tempo of a loop, but change the drum *pattern* altogether. Using a sampler, ReCycle can map each beat to a different key on your keyboard to create a construction kit of independent sounds you can use (dare we say recycle) in your own drum patterns.

If you use loops in your music production, ReCycle is a must-have tool. If you have a sampler, ReCycle will change the way you use loops forever. We mean it.

—Andrew Tokuda

good news: Simple to use. As deep as you want it to be. Almost infinite looping possibilities.

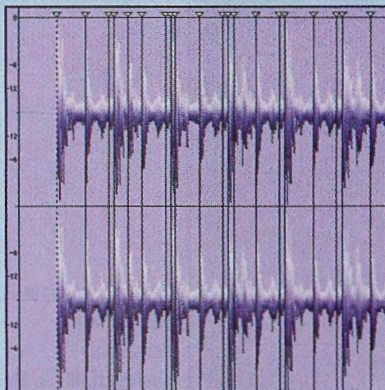
bad news: Compels you to kick the drummer out of your band.



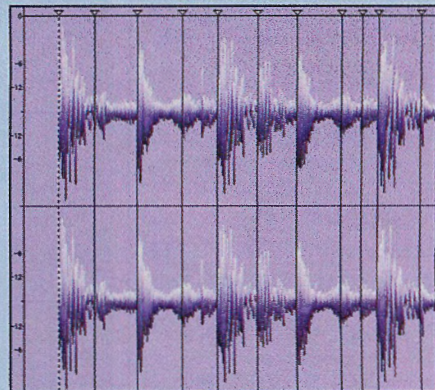
Chop, Chop!

The process of "slicing" audio couldn't be simpler.

- 1 Open an audio file, such as a drum loop.
- 2 Move the Sensitivity slider until ReCycle detects the individual beats.
- 3 Set the beginning and ending points of the loop.
- 4 Tell ReCycle how many bars (or measures) are in the loop.
- 5 Save your loop in a format befitting your audio setup (AIFF, WAV, REX2, SoundFont, and so forth).



Too many slices make for a sloppy loop...



...deleting unwanted slice points gives you a cleaner-sounding and more manageable loop.

Onadime Composer 1.4

multimedia

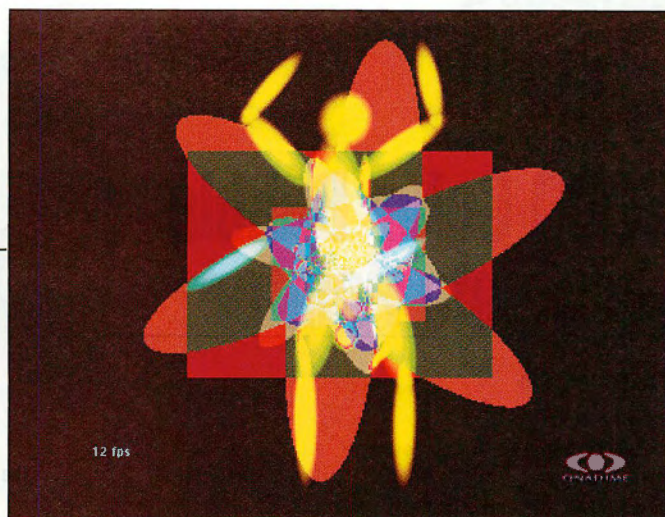
Company: Onadime

Contact: 877-662-9037, www.onadime.com

Price: \$199 (SRP)

Requirements: Power Mac 603e or faster, Mac OS 8 or later, 16MB RAM (64MB recommended), QuickTime 3.0 or higher (4.0 recommended), CD-ROM drive

Composer's full-screen Performance mode makes for a groovy multimedia screen saver.



Wouldn't it be cool if you could make your own synchronized multimedia eye candy, à la iTunes Visuals? When Composer arrived at our door, claiming it could do all that—blend images, graphics, video, sound, and movement into complex *live media creations*—we expected a tough learning curve. Instead, Composer's user-friendly interface, drag-and-drop programming, and concise PDF manual made us feel like instant multimedia mavens.

Using Composer is much easier than trying to understand it; simply put, you import any QuickTime-supported media (GIF and JPEG images, AIFF and MP3 audio, MOV and MPEG movies, text, live video, and so on), and create dynamic effects by linking media elements and/or computer input. For

example, you can combine pictures that morph in predefined patterns or according to a song's frequency bands or tempo, MIDI inputs, mouse movements, and keyboard inputs. Confused? Don't worry. It's intuitive, especially after you browse through Composer's onboard manual.

Composer's interface consists of two windows: the Console window, for viewing your media composition in progress, and the heart of Composer, the Links window—a patch bay where you link Forms to effects by connecting input and output leads. Just don't let your mouse wander: Composer's Smart Surf consistently annoyed us by activating whichever window we let the cursor drift over. The interface has a few other quirks, too. We experienced stuttering audio when switching to and from Performance (full-screen) mode

and loading modules in the Console window. Also, the Links window's scroll bar is slightly narcoleptic, usually requiring an extra click or two before it does its job. Composer barely worked in Mac OS X's Classic mode—most options were grayed out and the application crashed repeatedly.

We had a blast both creating and playing with live media in Composer. Multimedia gurus may find it limited, but for the rest of us who want to dabble in interactive multimedia without reading huge manuals, Composer's just the ticket. —Andrew Freid

good news: Nearly effortless motion-graphics creation. Intuitive GUI. Excellent manual. **bad news:** Quirky interface. Interactive playback requires proprietary Free Player.




For a demo of Onadime Composer, see The Disc.

Dance, Pilgrim!

Composer's frequency-dependent modulation creates image movement that's synchronized to a music track's audio frequencies. For example, here's how to reprogram Composer's inboard Dancing Figure to make it dance to your own tunes.

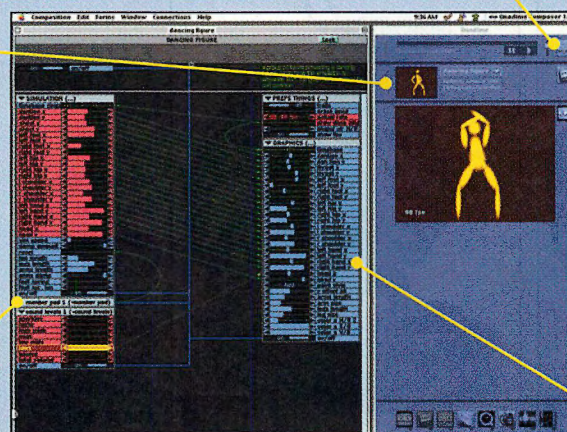
1 Click the Console window's Composition Chooser icon (or press Command-Shift) and choose Dancing Figure from the pull-down menu.



2 Choose Sound Levels from the Sound Input section in the Forms pull-down menu. Corresponding frequency leads will appear in the Links window.



3 Click the MP3 icon in the Console window, then click the MP3 module to load your favorite danceable MP3. Click the play button to start the music (for a real-time preview).



4 Click the Dancing Figure's Head X lead and clear the Link (choose Clear Link & Binding from the Edit pull-down menu or press Command-X). Then create a new link by dragging the Head X lead to the Lows lead in the Sound Levels Form, and the figure's head moves sideways in time with the kick drum. Congratulations, you're a programming genius!

5 Choose Save As from the File menu to export your Composition as a QuickTime Movie or an .osa file (playable in Onadime's Free Player application).



S800 Color Bubble Jet Photo Printer

hardware

Company: Canon

Contact: 800-652-2666, www.usa.canon.com

Price: \$299 (SRP)

Requirements: Power Mac, Mac OS 8.1 or later, 10MB RAM, 30MB hard disk space, USB port

With Canon's heavyweight reputation in the photography arena, it's only fitting that the company would challenge Epson's photo-printer dominance by introducing the Canon S800 Color Bubble Jet Photo Printer. Certainly Canon has one-upped Epson by making a printer with separate ink tanks for each color (finally, no more tossing out half-used ink cartridges) and giving it a lower price, but is it enough to fell the king of the photo-printer hill? Nope.

The S800 Bubble Jet is hardly a disappointment—it's a terrific printer that produces remarkable results when printing high-resolution images on Canon's glossy photo paper. Colors are dead-on accurate, and the undetectable ink droplets yield high resolution and clear details. The print times are decent (about 3 minutes and 20 seconds per 8 by 10 photo).

The printer features 6-ink color printing (adding light cyan and light magenta for better photo quality), with each color in its own separate, replaceable ink tank. It also features 2,400-by-1,200-dpi print resolution,

49 levels of gradation (tonal range), and USB support. Plus, the device comes bundled with a Zio CompactFlash USB card reader.

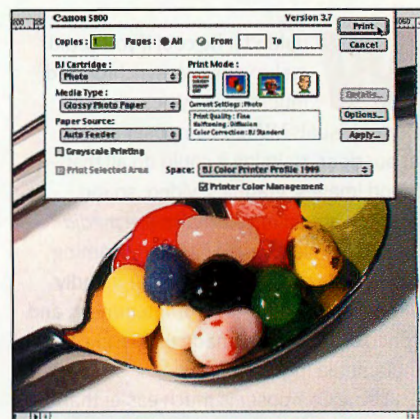
Unfortunately, like a tequila-swiggin' buddy, the S800 sometimes has the audacity to misbehave. The quality of our first four prints impressed us, but our fifth photo didn't show the same clarity and tonal depth. Luckily, Canon equipped the S800 with a warning light that intermittently flashes amber and green when something goes wrong. Even more luckily, a chart in the S800's manual explains what the different light patterns mean—ours meant the printhead was dirty. After we used the printer's software to clean the head, our second pass was a success.

We can forgive the odd error, but it almost felt like the S800 *wanted* to show off its warning system—the printer flashed warnings after about every eighth print. Our flawed prints displayed problems such as color shifts between identical photos, missing ink colors, cyan color casts in black-and-white images, and narrow tonal ranges. Still, when the S800 behaves, its output is well worth the wasted paper.

Comparing prints, we found that the S800's tonal range isn't as broad as our



The S800 can produce stunning photos when it wants to.



Set the type of file, quality, media, and color space in the printer's driver utility.

Epson 870 photo printer's. Though the S800 is good, it doesn't produce enough detail in shadows, making our rocky cliffs appear as silhouettes instead of displaying the deep texture clearly evident on our screen. Also, images don't print as bright as we'd like—but we're picky that way. The S800 will please most photo hobbyists.

Text is a different beast, and is probably the S800's weakest offering. Not only are print times slow (an 8-page Word file with 12-point, double-spaced type took 7 minutes and 46 seconds at the fastest print setting), but also the quality (on plain paper) is on par with that of a dot-matrix printer. Fonts are legible but fuzzy, though to the S800's credit, even small, fuzzy 6-point type is readable.

The Canon S800 is a good, high-quality photo printer with the potential for greatness. With improved consistency, the S800 will surely give Epson a run for its money.—Kris Fong



Before we cleaned the printhead, this image printed out fuzzy, with the wrong colors. After cleaning, we got a sharp image and accurate color.

good news: Accurate color. Beautiful, crisp results—when it behaves. Separate ink tanks. **bad news:** Temperamental print quality. Limited tonal range. Marginal text quality.



Stitcher 3.0

multimedia

Company: Realviz

Contact: 415-615-9800, www.realviz.com

Price: \$495 (SRP)

Requirements: G3 or faster, Mac OS 9.1 or later, 128MB RAM, 15MB hard disk space, 1,024 by 768 screen resolution, OpenGL compatibility, 2X CD-ROM drive

Realviz is well known in the video- and 3D-production world, but only on the dark (PC) side.

However, the Mac release of Stitcher 3.0 is likely to extend its good reputation to Apple fans—Stitcher is one of the most comprehensive panorama tools we've seen on any platform.

Panoramas come in many forms (see "Pan-o-what-a?", below)—most commonly as user-navigable, 360-degree cylindrical QuickTimeVR. Stitcher is uncommonly versatile, exporting cylindrical and planar panos, as well as static formats, like loooooong JPEG images for printing or posting to the Web. Too bad exporting to Shockwave 3D is currently a Windows-only option.

Pan-o-what-a?

A panorama is a series of images stitched together to create a larger image—how you acquire those images and put them together determines the panorama's type.

Planar Conjoined photos create a flat, perspective-corrected image that resembles an oversize panoramic photo. Planar panoramas are used for 3D compositing or for scrolling backgrounds in video, movies, and games.

Cylindrical You take pictures in 30-degree increments across a 360-degree horizontal arc and stitch them into a cylinder of images around a center point.

Spherical Starting with a cylindrical panorama, you add images for 180 degrees of vertical view, creating a sphere around the camera. Projecting the sphere onto the interior of a cube creates top, bottom, left, right, front, and back views.



Stitcher can create virtually any kind of panorama, such as the planar one in progress here.

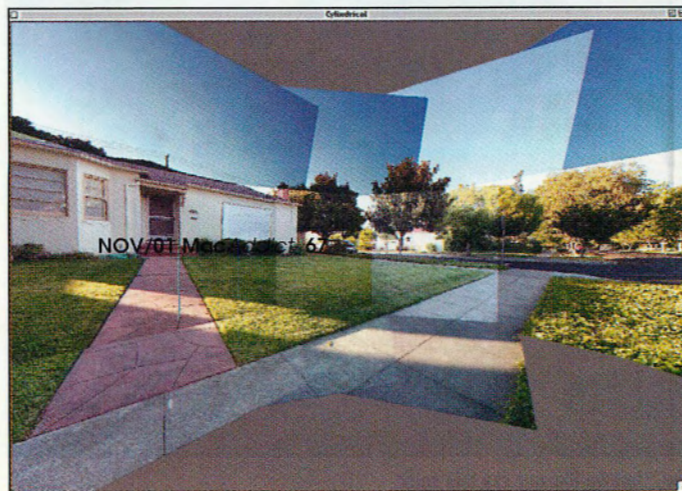
Two of the biggest problems facing "panoramographers" are perspective correction and lens distortion, but as long as images overlap by about 30 percent, Stitcher can merge the images together and correct lens distortion, color, and brightness across the whole scene. Stitcher also determines the focal length of your lens and corrects the distortions that occur when you stand in one place and take photos in different directions. It is quite amazing to watch the program match up a street lamp, for example, that curves to the right in one image and to the left in the next. As long as there are a few salient points to align, Stitcher can put together a balanced image.

Stitcher is very powerful and easy to use with its drag-and-drop interface, but it isn't perfect. Surprisingly for a 3.0 version, it lacks mature program features like rollover tool help and remembering your preferred window locations when you start a new project. It is also just a little bit buggy. The

most common problem we had was when existing projects wouldn't open after we'd been working in the application for a while. Quitting and restarting Stitcher always corrected the issue. Stitcher uses hardware serialization to prevent unauthorized copies—which also prevents you from using it legitimately (that is, not simultaneously) on a second machine.

Once you learn Stitcher's nuances, it affords tremendous control over panoramic output. If you just want to show off your new living room, it's serious overkill. But if you want to do complex panorama work, create spherical panoramas, or use compositing, 3D, or video applications, you will get a lot of mileage out of Stitcher's features.—Rick Sanchez

good news: Excellent-quality panoramas. Lots of output options.
bad news: Hardware serialized. Interface is rough around the edges.



Stitcher does an excellent job of equalizing different images' color and brightness levels for a consistent view.



Find a demo of Stitcher 3.0 on The Disc.

PhotoPC 3100Z

hardware

Company: Epson

Contact: 800-463-7766, www.epson.com

Price: \$799 (SRP)

Requirements: Power Mac G3 or faster, Mac OS 8.5.1–9.x, 32MB RAM, 30MB free hard disk space, USB, CD-ROM drive

Epson's new 3.3-megapixel PhotoPC 3100Z looks identical to the recently released 3000Z, but don't let the similarity fool you. The 3100Z lacks most of its predecessor's quirks, it's \$200 cheaper, and it incorporates Epson's new Print Image Matching (PIM) technology (see "Match Points," p57). All told, the 3100Z represents a good deal on a solid, advanced, consumer digital camera.

The 3100Z's no-nonsense design and convenient controls make it easy to use right out of the box. Buttons and functions are clearly labeled, and you don't have to drill through endless submenus to change settings. Though it looks a bit blocky, the camera is fairly light and fits well in your hand. The optical viewfinder is bright and clear, and the 1.8-inch LCD is sharp and works well—even in bright light.

The Epson's good handling complements its advanced features: primarily a smooth and sharp 3X zoom lens that, in macro mode, can focus in as close as 2.3 inches from your subject. The camera also lets you

Pretty as a picture...not! But the 3100Z takes pretty pictures.

choose between fully automatic, semi-automatic, and manual exposure modes. If you dabble in cinematography, you can make Motion JPEG movies, too, though you need to get right to the point—video clips with sound are limited to 25 seconds (at 15 fps and 320 by 240 pixels). Four AA batteries are included in the box, but the eco-friendlier, rechargeable NiMH cells and AC adapter are extra.

Though the feature set is good, it's not perfect. For example, there is an auto white balance function, but only one additional pre-set, so you have to use the slightly inconvenient custom white balance function when shooting indoors. Also, you can't adjust the 3100Z's in-camera sharpening, contrast, or color settings like you can in many other high-end digital cameras.

Happily, the 3100Z produced very good pictures, with consistently accurate exposures, sharp detail, and vivid color. We noticed several test shots where blues shifted noticeably toward purple, but that's fairly easy to fix in Photoshop. Our flash pictures were well-exposed—skin tones were accurate and there was little red-eye.



PHOTOGRAPH BY W. R. JONES

To informally test Epson's PIM system, we printed several shots on the Epson 785EPX printer (see *Reviews*, this issue, p57) with PIM enabled, and then made duplicates with PIM turned off. Many of the PIM-enabled prints did, indeed, turn out better—colors were richer, especially greens and blues.

The 3100Z can record pictures in JPEG format at four pixel resolutions—2048 by 1536, 1600 by 1200, 640 by 480, or 2544 by 1904 (interpolated)—or it can capture a 2048 by 1536 TIFF. It saves photos on type 1 CompactFlash cards and comes with a 16MB card, which holds about 15 hi-res JPEGs.

All of the software included with the 3100Z (USB drivers, Sierra Image Expert, and Panorama Stitcher) is Mac compatible.

The PhotoPC 3100Z probably won't turn many heads at the next office party, but if you want a highly functional digital camera that takes great pictures for a reasonable price, this Epson is hard to beat.—*Eamon Hickey*

good news: No-nonsense design. Generally great pictures. **bad news:** No real image adjustments.



It's not exactly "sky blue," but we like our sky this color.



Even without onboard contrast or color control, the 3100Z can handle close-up flash shots.

PHOTOGRAPH BY EAMON HICKEY

Stylus Photo 785EPX

hardware

Company: Epson

Contact: 800-463-7766, www.epson.com

Price: \$249 (SRP)

Requirements: Power Mac G3 or G4, Mac OS 8.5.1–9.x, 64MB RAM, 10MB hard disk space, USB, CD-ROM drive



PHOTOGRAPH BY W. B. JONES

**Insert memory card and print:
no computer required.**

The Stylus Photo 785EPX is the latest in Epson's renowned line of photo-quality inkjet printers. It shares many of its specifications with its junior sibling, the Stylus Photo 780, but adds roll paper compatibility and a memory card slot that, with the right adapter, lets you print directly from CompactFlash, SmartMedia, and Memory Stick photo storage cards. The 785EPX also supports Epson's new Print Image Matching (PIM) technology (see "Match Points," below). Whether these features are worth the extra cost (\$249 versus the 780's \$99 price tag) depends on your individual needs, but there's no doubt that the 785EPX is one terrific photo printer.

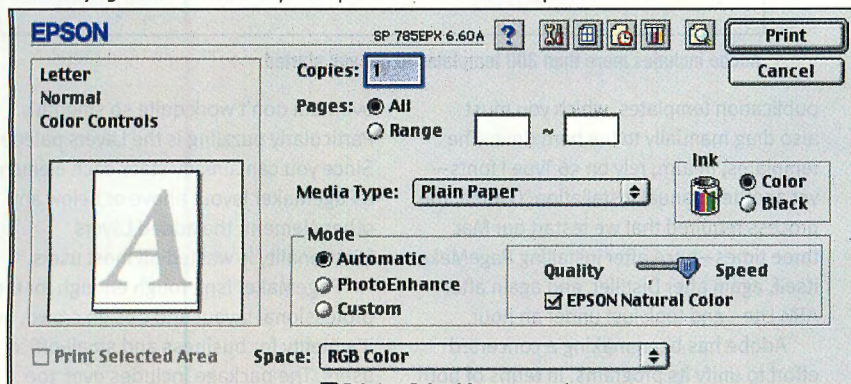
The 785EPX's specs are impressive: 2880-by-720-dpi resolution, 4-picoliter ink droplet size, and six ink colors (adding light cyan and light magenta) rather than the standard four. The printer's high resolution yields clear text, certainly competitive with other inkjets, but you don't really buy a Stylus Photo model for text printing. The 785EPX is designed for printing pictures, and it does that stunningly well. Photos print with rich, saturated colors, very smooth tonal gradations, and excellent sharpness; they're indistinguishable from traditional chemical prints.

At 2880 dpi, a full color 8-by-10-inch photo can take as long as 12 minutes to print, though smaller prints at lower resolutions print much faster. Text-printing speeds range from 8 ppm in Economy mode (360 dpi) to .5 ppm in Fine mode (720 dpi). The 785EPX accommodates 4-inch roll paper as well as cut sheets up to 9.5 by 44 inches.

As of press time, the 785EPX's driver software does not support the new PIM system (meaning PIM only works when printing from a memory card), but Epson should have a PIM-enabled driver available by the time you read this. A Mac OS X-compatible driver is due out "in a couple of months"—whatever that means. We were also mildly irritated that Epson doesn't include a USB cable with the printer.

Those quibbles aside, if you're a digital photographer—and especially if you want to make prints directly from your camera's memory card—you won't find a better inkjet than the Stylus Photo 785EPX.

—Eamon Hickey



Even in auto mode, the 785EPX is full of options.

good news: Stunning photo-quality prints. Prints from memory cards.
bad news: No USB cable.



Match Points

You might be surprised to learn that your camera often throws away or alters some of the colors it captures. Why? It must to comply with the industry-standard Design rule for Camera File system (or DCF), which specifies the monitor-friendly sRGB as the target color space for digital photos. The standard doesn't contain some of the colors your camera can record, so your camera changes or tosses those out-of-gamut colors—no wonder your prints don't look like the original scene.

Epson's new Print Image Matching (PIM) technology is designed to make an end-run around the limitations of sRGB. A PIM-enabled digital camera embeds information about its native

color capture abilities in the header of every picture it takes. A PIM-enabled printer can decode that information, which it uses to restore discarded colors (printers that aren't PIM-enabled simply ignore the info). PIM can also improve print quality by encoding other image properties, such as sharpening and contrast.

PIM-enabled cameras and printers are still scarce, but many of digital photography's major players have announced support for Epson's new system, including Sony, Olympus, Nikon, Casio, Minolta, and Toshiba.

Epson's badge of color honor.



PageMaker 7.0

design & graphics

Company: Adobe

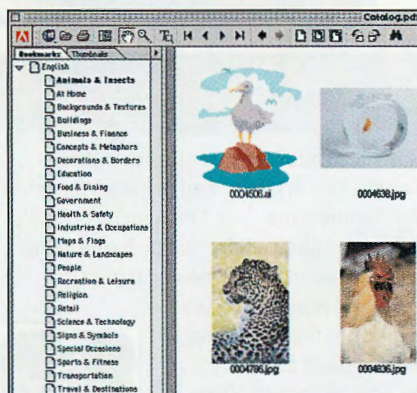
Contact: 408-536-6000 or 800-833-6687,
www.adobe.com

Price: \$499 (SRP), \$289 education, \$79 upgrade
from version 4.0 or later

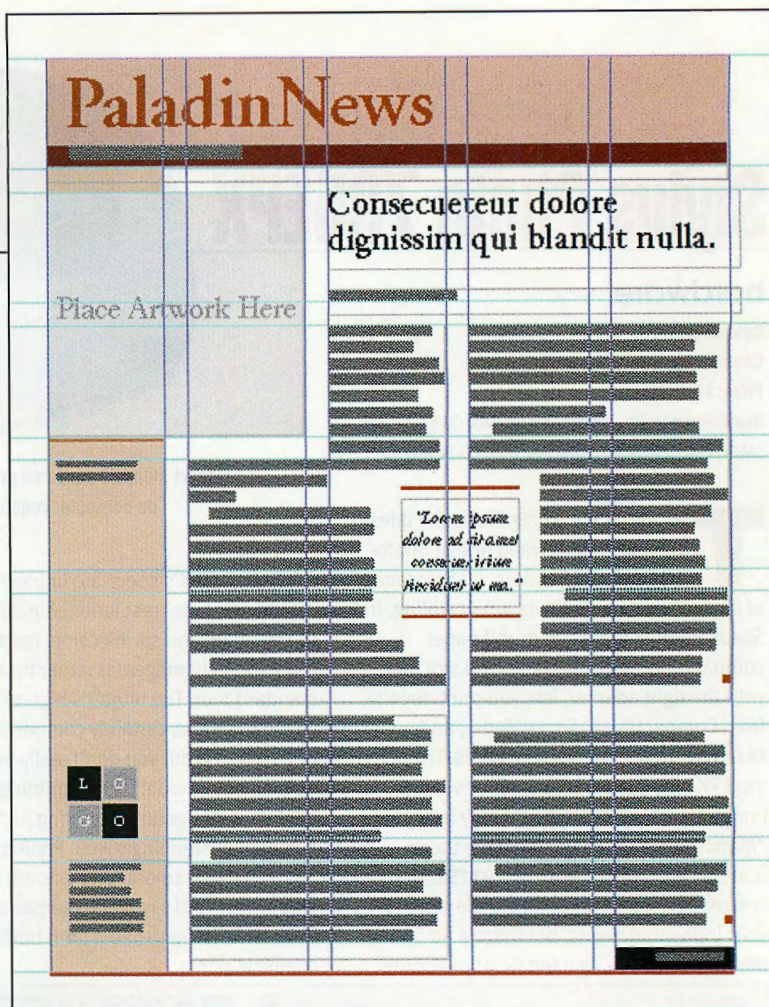
Requirements: Power Mac, Mac OS 8.6 or later,
16MB RAM (32MB recommended), 100MB free hard
disk space (300MB recommended), 800 by 600 screen
resolution, CD-ROM drive

Throughout the 1990s there were only two choices for desktop publishing: Adobe PageMaker and QuarkXPress. Quark quickly established itself as the professional package, and Adobe finally upped the ante in 1999 by releasing InDesign (*Reviews*, Dec/99, p62) as a more worthy competitor for Quark. So what of our trusty PageMaker? At version 7, it's still a solid layout program and a viable solution for people who need to create an impressive, professional-looking design without hiring a professional designer.

The first step—installing PageMaker—is unfortunately the most annoying. PageMaker requires that you have some version of Adobe Type Manager installed on your Mac, as well as Acrobat Distiller 5 for creating PDF documents. The installer doesn't check for these components, but alerts you that you may need them; fortunately, ATM Lite 4.6 and Distiller 5 are on the PageMaker disc, though you'll need to install them manually. Adobe also includes a slew of professionally designed



Adobe owns Fetch, a perfectly capable image-cataloging package. So why is the clip art catalog a PDF?



Adobe includes more than 300 templates to get you started.

publication templates, which you must also drag manually to the hard drive. The templates, in turn, rely on 56 Type 1 fonts—yet another manual installation. Overall, the process required that we restart our Mac three times—once after installing PageMaker itself, again after Distiller, and again after ATM Lite—and took just under an hour.

Adobe has been making a concerted effort to unify its programs, in terms of both interface and file-format compatibility. PageMaker reaps the results of these efforts, and they're a mixed blessing. On the plus side, PageMaker 7 now directly imports Photoshop and Illustrator files, complete with full layer support. This means the image files (in your PageMaker document) update as you work on them in their respective applications—a godsend for designers tired of maintaining separate groups of in-progress images. Adobe's patented palette approach to interface design also makes some operations easier, such as launching scripts (now contained in a palette similar to Photoshop's Action palette) and choosing between multiple master pages. Other aspects of the interface

overhaul don't work quite so smoothly. Particularly puzzling is the Layers palette. Since you can already stack each element in a PageMaker layout above or below any other element, the added Layers functionality is wasted on most users.

PageMaker isn't tough enough for the professional layout and design crowd, but it's plenty for business and small-office users. The package includes over 300 professionally designed templates in both A4 and letter-size formats. Using templates and PageMaker's new Data Merge function, it's simple to crank out slick form letters, company directories, newsletters, and other documents without endlessly copying and pasting individual names, addresses, or other recurring data.

Adobe also provides 300 stock photos and mountains of clip art, giving you plenty of out-of-the-box fodder for flyers or corporate reports. Navigating this wealth of creative compost, however, is a bit trying. The Windows version has palettes for browsing through both the templates and the clip art, but the Mac version lacks these palettes. This forces users to dig through a

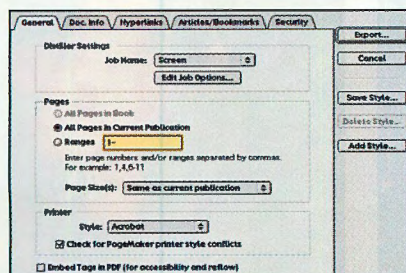
massive PDF catalog to find the clip art they want (without so much as a keyword search!) and open templates one at a time to find the right look.

Adobe has been pushing the e-book format—the company's portable, platform-independent, copy-protected answer to dead-tree books—for years now, and PageMaker finally gives us the tools to create e-books. You can also export your layouts to HTML for the Web, but many text and graphic adjustments (such as resizing, repositioning, changing fonts, and drawing boxes and polygons) get lost in translation, making HTML export useless for anything more complex than simple text documents (see "HTML Hell," right).

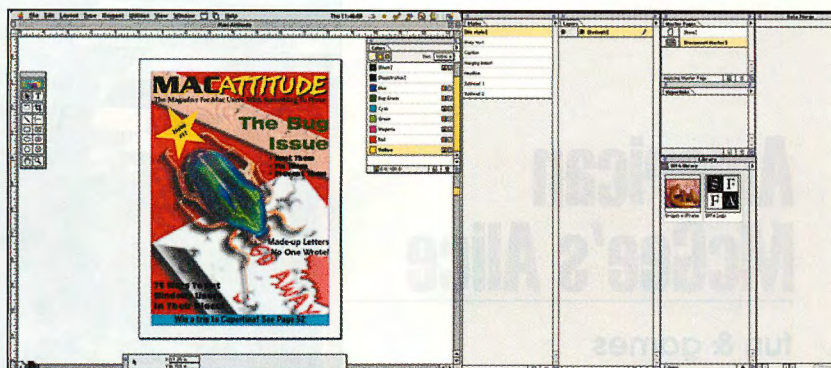
A number of functions depend on utilities bundled with PageMaker, such as Acrobat Distiller for creating PDF files, Adobe Table for quickly generating complex table layouts and saving them as ready-to-place graphics, and the QXP Converter utility for bringing Quark documents into PageMaker. The utilities work well; we couldn't decipher the Quark converter's file-naming convention (see "Rock Around the Quark," below), but the converted pages themselves stayed remarkably true to the original layout. Here again, Mac users miss out on some functionality—Windows users can also convert Microsoft Publisher documents.

Our main beef with the Mac version of PageMaker is its lack of feature parity with the Windows version, particularly the absence of a template-preview palette. We were also hoping for a Carbonized version, though PageMaker does play well in Mac OS X's Classic environment. Historically, PageMaker has always managed to strike a terrific balance between ease of use and layout control, and that's one thing that hasn't changed.—*Rich Pizor*

good news: Easy PDF export. Lots of templates. Data merge.
bad news: Not Carbonized. Epic installation. Mac version missing some features. No template preview.



PageMaker's PDF export is packed with options, perfect for e-books or online manuals.



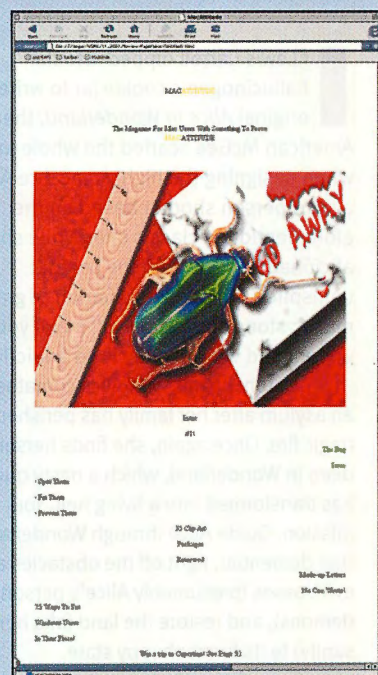
It's best to have lots of room to work—with all its palettes open, PageMaker dominates a pair of 17-inch monitors at 1,024 by 768.

HTML Hell

While PageMaker can export files as HTML, don't expect it to replace Macromedia's Dreamweaver. A number of PageMaker's edits simply won't carry over into HTML; the result is a very large table with text and graphics in odd places. Follow these guidelines for a smoother transition from print to online:

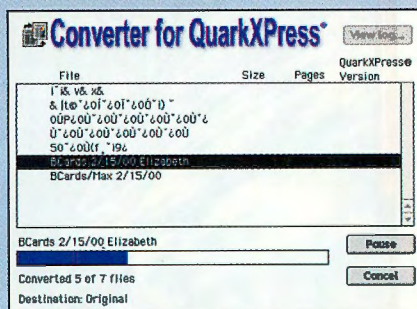
- Don't resize or rotate your graphics.
- Use the Styles palette to set common fonts and sizes.
- For fancy typography, create text graphics in another program (like Photoshop).
- Convert tables to graphics with the Table utility.
- Keep your text flow simple—use no more than two columns, and don't run text around graphics or other elements.

PageMaker's HTML export hasn't quite come of age—this relatively simple layout turned into a mess when we tried to make it a Web page.



Rock Around the Quark

PageMaker can't import Quark files directly, but the included QXP Converter utility does a fine job of it. The utility couldn't be easier to use; just launch the app, select the Quark files you want to convert, and press the Convert button. This seems simple, but when we tried converting a collection of business card files, the converter utility replaced the file names with a jumble of nonsense characters as it completed each conversion. Adobe couldn't explain this oddity by press time, but the converted PageMaker files looked fine—better than we expected, in fact.



These file names look a little weird, but the PageMaker files turned out just fine.

American McGee's Alice

fun & games

Company: Aspyr Media

Contact: 512-708-8100, www.aspyr.com

Price: \$49.95 (SRP)

Requirements: 400MHz G3 or faster, Mac OS 8.6 or later, 128MB of RAM (216MB recommended), 800MB free hard disk space, hardware 3D acceleration, 4X CD-ROM



Find a demo
of Alice on
The Disc.

If Lewis Carroll dipped into the hallucinogenic cookie jar to write the original *Alice in Wonderland*, then American McGee scarfed the whole lot when designing the highly macabre Alice, a third-person shooter based on the aforementioned classic tale. While shooter aficionados might find the combat uninspired, Alice's combination of graphics, music, story, and action will make you understand why insanity is so addictive.

The story begins with Alice comatose in an asylum after her family has perished in a tragic fire. Once again, she finds herself knee-deep in Wonderland, which a nasty queen has transformed into a living hell. Your mission: Guide Alice through Wonderland (her dementia), fight off the obstacles and evil bosses (presumably Alice's personal demons), and restore the land (aka her sanity) to its former happy state.



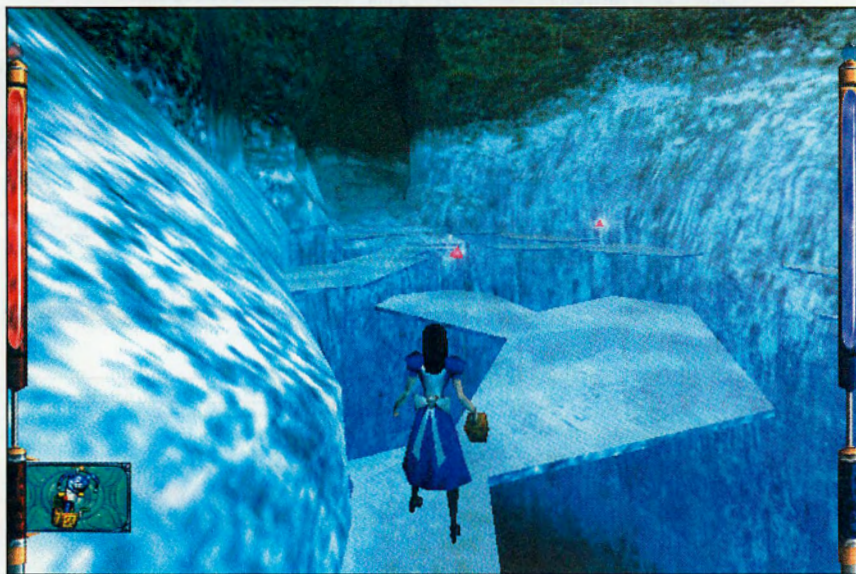
Just one of the many beautiful worlds Alice stumbles upon.

As Alice runs, jumps, swims, swings, and strafes her way through the 40-odd levels in Wonderland's nine regions, she accumulates nine toys, which she uses to battle pesky miscreants and tough bosses. During this time you must manage her sanity (via the red bar on the left side of the screen) and her will (via the blue bar on the right, which essentially measures how much ammo she's got left). Each weapon offers a different ratio of damage inflicted to willpower used. For example, Jacks cause lots of damage without draining much of Alice's will. (For more on Alice's arsenal, see "Killer Toys," p61.)

The game is based on the Quake III engine, and it goes without saying that the graphics are more than half the reason to play it: the falling mists in the Pool of Tears,

the lush green of Wholly Morel Ground, and the Escheresque black-and-white beauty of the Pale Realm. There's another reason not to rush straight through the levels: Spend some time looking around, and you'll find helpful power-ups like the Looking Glass, which makes you invisible, and the Deadtme Watch, which freezes your opponents while you kill, kill, kill.

But great graphics come at a price—in this case, the system requirements. While the game officially requires a minimum 128MB of RAM, Aspyr recommends at least 216MB, and it's no joke—Alice stuttered and sputtered on our 400MHz G4 with 192MB of RAM. And believe it or not, we actually recommend that you try this game on Mac OS X: It's gorgeous and it plays well.



Alice be nimble, Alice be quick, or Alice will die in the deep abyss.



You have to combat bosses like the Jabberwock to save Wonderland.

Friends and Foes

Alice's Wonderland is filled with imaginatively animated characters. Some of them like you. Others would like to *eat* you.

FRIENDS



Despite its alarming smile, the **Cheshire Cat** offers Alice advice, however cryptic it may be.



A fat, frozen oracle—the **Caterpillar** offers Alice clues on getting out of this mess.



The **Gryphon** selflessly sacrifices his life to aid Alice in her fight against the Jabberwock.

FOES



The **Crazed Duchess**, armed with pepper spray, is the first boss you'll encounter.



Kill the **Red Queen** and you'll save Wonderland ...almost.



The **Mad Hatter** is back, experimenting on small, furry animals. Stop him!

Gameplay in Wonderland generally consists of fighting, acrobatics, and puzzles. Aside from the lower-level fire imps, phantoms, and screaming velociraptor wannabes, Alice fights a handful of extremely ugly, extremely nasty bosses. (We bet they smell.) Beating them requires finding the right combination of weapons. For example, the Icewand and Jackbomb make a formidable combination against the Centipede (and that's the only hint we'll give you).

Fighting the boss creatures is a bit frustrating. The game gives no indication of how you're doing or how fast the creatures are weakening; you just keep pounding away until, with little or no warning, they keel over and die.

The acrobatics of bouncing off mushrooms, swinging from vines, swimming down chutes (Alice could benefit from a few swim classes), and hopping across giant mechanized gears can get really monotonous. It's cheating, but we used the F4 quick-save feature liberally to mark our place before we (accidentally) hopped into molten lava, deep abysses, and other environmental hazards.

And finally, puzzles provide a brain-teasing break between the firefights and aerobics—they aren't hard to solve, once you figure out where or how to begin. (OK, one more hint: In Castle Keep, after pulling the mirror-turning lever, bolt upstairs to the three rooms.)



Believe it or not, this is a desirable state. The grasshopper power-up gives Alice enhanced jumping capabilities.

American McGee's Alice is way creepier than the original, and the spooky music by Nine Inch Nails' Chris Vrenna only adds to the intensely real trip down insanity lane. The most extreme (and jaded) hard-core shooter fans will find Alice tilted a little too much toward form over function, but everyone else (and that's most of us) will, quite literally, go crazy for it.

—Narasu Rebbapragada

good news: Beautiful graphics. Mac OS X compatible. Engaging storyline.
bad news: Memory hog. Bosses give no indication of weakness.



Killer Toys

It's all fun and games until Alice busts out the toys of Wonderland.

Eyestaff The Jabberwock's Eyestaff directs a deadly beam at your enemy, but it saps your strength quickly.



Vorpall Blade Basically a knife. Alice can use this weapon melee style or throw it short distances. It's handy for killing guards and fish. Plus it's all you've got left if you drain your blue willpower meter.



Cards Alice can chuck individual cards or hurl the whole deck. Not our favorite weapon, Cards require precise aim, they're not as powerful as other weapons, and they use up your blue meter fast.



Demon Dice We used this toy least.

Throwing the dice at a gaggle of enemies unleashes demons that will help you fight them. Roll these dice when you're alone in a room, and guess whom they go after...



Mallet For pounding or launching croquet balls. The second use is effective against flying birds.



Jackbomb Throw this at your enemy to inflict massive damage, then run away fast or you'll set yourself on fire.



Icewand Like Dentyne, the Icewand inflicts an icy blast that freezes fire imps almost instantly. Alternatively, it can form a safety shield for a few seconds.



Jacks This toy rocks. Toss a handful of Jacks at a midrange enemy and watch them bang away, often taking down your foe with one throw. It takes a while for them to return to you, so don't use Jacks at superclose range.



Blunderbuss This elusive weapon is almost essential during the game's final levels. Hint: To find it, pay attention to Humpty Dumpty.



Toon Boom Studio 1.0

multimedia

Company: Toon Boom Technologies

Contact: 714-433-0400, www.toonboomstudio.com

Price: \$374 (SRP), \$349 (for download)

Requirements: Power Mac G3 or faster, Mac OS 10.0.1 or later, 128MB RAM, 100MB free hard disk space, 1,024 by 768 screen resolution, Wacom tablet recommended



Find a demo of Toon Boom Studio 1.0 on The Disc.

Making the jump from traditional cartooning to Web animation has always been a daunting proposition. Enter Toon Boom Studio: it provides just the tools you need, and uses terminology familiar to traditional, pencil-pushing cartoonists (Light Table, Field Grid, Exposure Sheet). The interface even resembles an old-school animator's desk.

Toon Boom Studio has two modes: Drawing and Sceneplanning. Drawing mode sports vector-based drawing and editing tools, and facilities to import alpha-masked, 32-bit images (including GIF, JPEG, TIFF, and PNG), Adobe Illustrator files, and Flash SWF movies. Handy drawing aids include Onion Skin view, which allows you to see the previous three frames while working on the fourth; Light Table mode for viewing underlying layers while working on the active layer; and a 12-field grid, which you can set to 16 fields and toggle between Underlay and Overlay modes.

Sceneplanning mode features a linear timeline with Top View, Side View, and Camera View windows. This is where you animate elements created in Drawing mode. Traditional animators will recognize Camera View as a virtual multiplane camera—it lets

Need a little help? Toon Boom's Field Grid and Onion Skin features make pen-and-ink animators feel right at home.

you move through a stack of layers, adding depth to layers that are actually flat art. In addition to the main Camera View, the Top and Side Views are critical to positioning the camera in 3D space.

The program includes numerous thoughtful features, such as support for scene templates (for reusing the same drawings in multiple frames) and an Exposure Sheet, where you can keep track of your art elements and layers. Toon Boom's Color Palette Styles provide another welcome timesaver: By applying a different color palette to the same element or scene, you can instantly change the coloring from, say, daytime to evening colors without repainting any frames.

As cool as Toon Boom is, it has some drawbacks. For video work, Toon Boom doesn't offer any option for pixel-based aspect-ratio correction. Toon Boom works in square pixels only, so you must configure the "camera" for a square pixel resolution, such as 640 by 480 or 720 by 540, and then scale the rendered QuickTime movie in another application (such as QuickTime Pro)

to match your desired video-output format.

Our main beef with Toon Boom is that you must render scenes or sections of scenes containing audio if you want to preview them. The rendering itself doesn't take long (although that depends on the scene's length and complexity), but the process of synchronizing picture to sound can be tedious. The ability to grab a playhead and scrub back and forth on the timeline would greatly simplify the job.

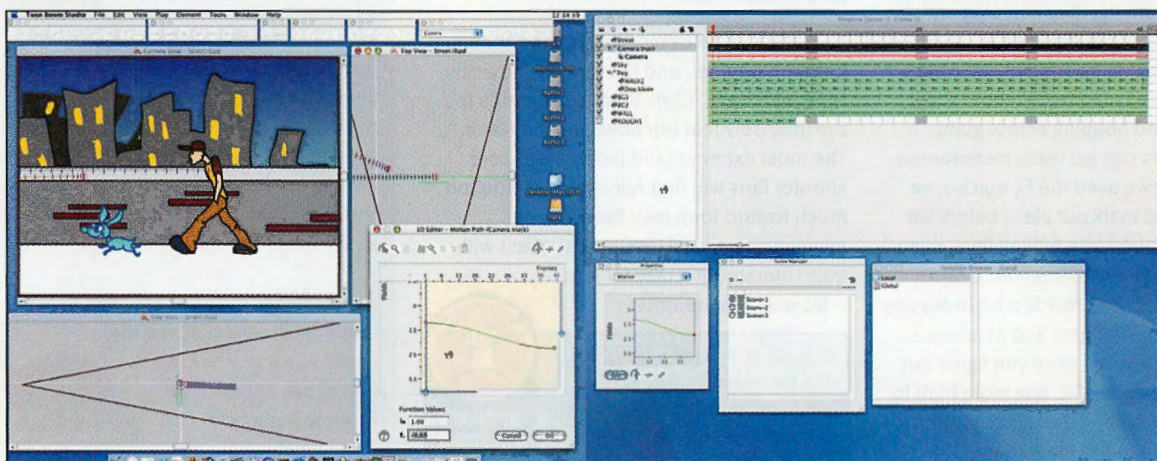
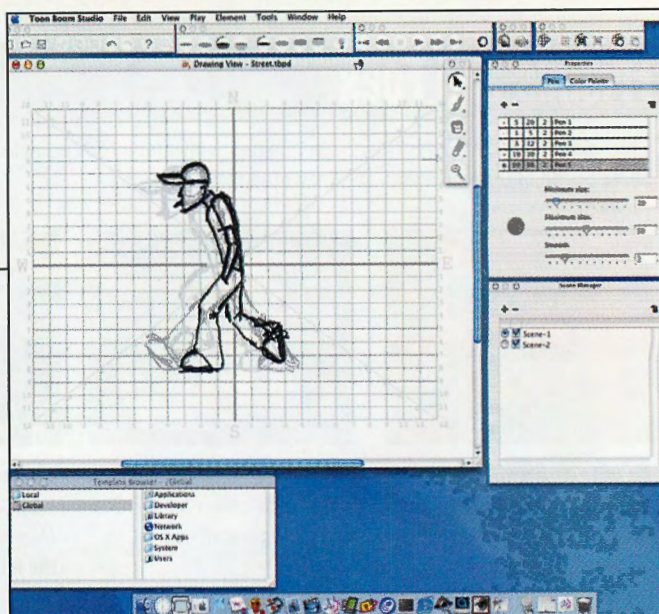
Toon Boom Studio installed easily and ran like a champ on our Dual-processor G4/450 running Mac OS 10.0.4, and we were delighted to find a Wacom tablet driver included.

If you're an animator looking for a reason to upgrade to Mac OS X, look no further. Toon Boom Studio is a powerful tool with a solid feature set.—Mike Caputo

good news: Good transition for traditional animators. Exports to Flash and QuickTime formats. Good product support. **bad news:** Off-limits to pre-OS X users. No audio scrubbing.



Three camera views (Main, Top, and Side) provide a virtual third dimension; a second monitor is all but required.



Summoner

fun & games

Company: GraphSim

Contact: 972-386-7575, www.graphsim.com

Price: \$44.95 (SRP)

Requirements: 300MHz G3 or faster, Mac OS 8.6 or later, 64MB RAM, 6MB VRAM, 800MB free hard disk space, 8X CD-ROM or DVD drive

While somewhat formulaic, Summoner is a slick-looking, engaging, and (mostly) well-constructed role-playing game (RPG) set in a medieval-style world. Though the game does have its problems, overall the negatives don't overshadow the intriguing gameplay.

You begin the game as Joseph, a knave born with the mark of the Summoner, who is uniquely able to summon creatures to his aid in combat. As a lad, Joseph attempted to use the power to save his village from invaders by calling up a demon who promptly thrashed the town and wiped out the population (oops). Years later, Joseph (now in exile) learns that the evil emperor Murod is out to get him. Joseph now must return to the summoning life he abandoned and fulfill his prophesied destiny: to vanquish Murod.

Combat is turn based, but you can lengthen your turn with chain attacks—these allow you to inflict extensive damage on your enemies by stringing together attacks, sometimes adding status effects like *slow* or *blind* (limiting an opponent's speed or vision, respectively). After you gain enough experience points by defeating enemies or by completing quests, you can assign skill points to enhance specific attributes.



The summoned monsters get tougher and more powerful the further into the game you get. This guy's pretty badass.



Your choices in topics of conversation tend to be limited.

Magic includes the standard arsenal of fire, ice, and lightning attacks, plus the summon command. When you summon monsters, you can control them as you would a regular character (by manually selecting their attacks and movements), except that you also have the power to banish them anytime. Along the way, you have the option to participate in endlessly diverting side quests. Solo mode allows you to break off from the rest of your party and explore on your own, which is sometimes necessary for puzzle solving.

The visuals (especially during the act of summoning) are stunning, with artful backgrounds and fluid water effects. One exception: The characters look as if they've been exhumed (Joseph in particular—sheesh!). The camera (our view of the action) behaved itself for the most part, although it occasionally got stuck behind trees and walls, obscuring the action and interrupting the execution of chain attacks.

The AI (Artificial Intelligence) lacked responsiveness—enemies clearly within

eyeshot stand around contemplating their navels while you slaughter their buddies. By the same token, if your own characters get stuck, you have to take control of them manually and guide them around obstacles.

Bugs in gameplay range from unintended powers, such as the ability to talk through walls (we once bypassed a whole section of the game just by shouting to someone on the other side of the wall), to outright crashes—usually when you've got the resolution or color depth set too high. One would expect that since it's taken a year for the game to come to the Mac, developers would have smoothed out these problems by now, but no such luck. Even so, Summoner offers an engaging story and is definitely worthwhile if RPGs are your thing.—Paul Yoon

good news: Summoned monsters are cool. Tons of side quests. Innovative combat. **bad news:** Buggy. Frequent crashes. Cadaverous characters. AI dumb as a stump.



Apparently we've crashed a coronation ceremony here. These priest guys really creep us out.

powerplay

Socks? Sweaters? Puh-leez!

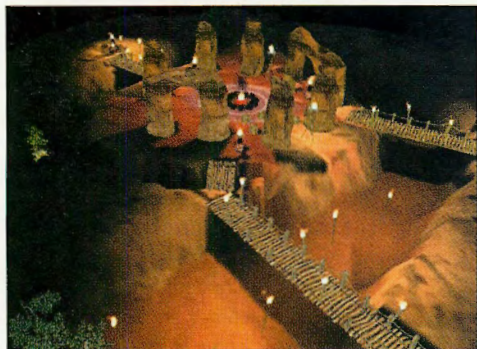
Games as Gifts— Good Idea!

The Stuff We Really Want



Find a demo of
Aliens vs.
Predator on
The Disc.

The end of the year is a mere hop, strafe, and jump away, and you know what that means—game developers are frantically cranking out their booty to cash in on the mad holiday spending frenzy. If you intend to fight, frolic, or frag your way through the rest of 2001, here's a sampling of what awaits you on the Mac gaming horizon.—*Kris Fong*

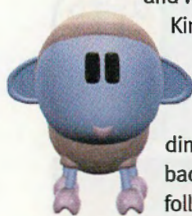


It's survival of the most obnoxious in **Survivor: The Interactive Game**.

Feral Interactive

Black & White is one of the most recent popular games your PC friends have been enjoying, and we Mac folk finally get the opportunity to visit the Land of Eden, thanks to the United Kingdom's Feral Interactive. See what it's like to play a god as you rule your people, build towns, train a creature, and wage war with other gods in this fantasy sim.

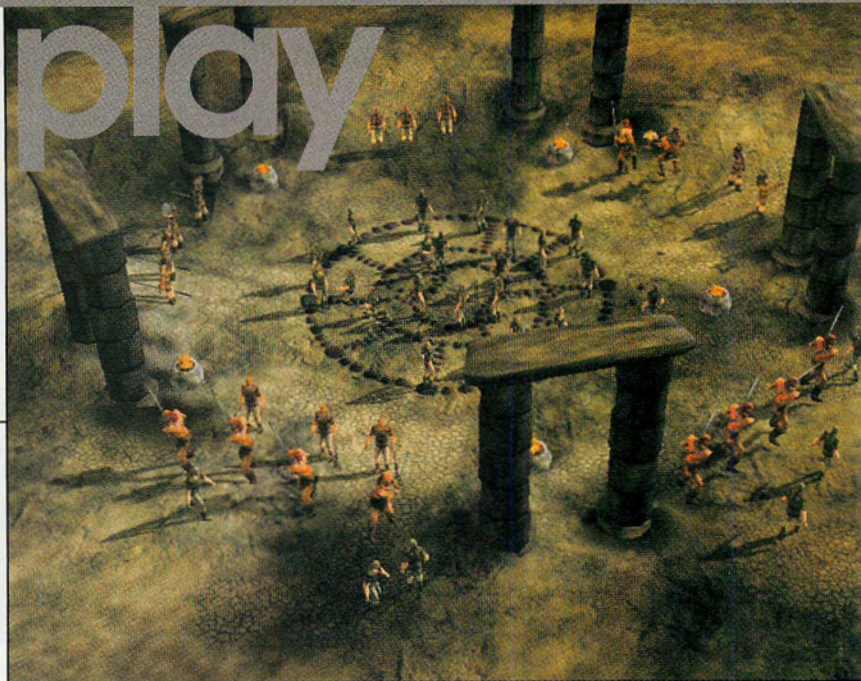
If things aren't woolly enough in the Land of Eden, you can make things more so with **Sheep**, an adventure-strategy game that has you corralling a flock of dim-witted, wayward, alien sheep through 28 levels of diverse terrain to bring them back to their ancestors. And if convincing sheep with attention deficit disorder to follow your lead seems like a walk in the park, the evil Mr. Pear and his leather-clad henchcows will provide you with plenty of obstacles to tackle.



Oh Sheep!



Lizard boy's bad breath kills **Otto Matic**.



Myth III's take on Tribal Council? If only obliterating the enemy was as easy as voting them off our land.

MacSoft

Just when you thought MacSoft was done donning its 80s-era zebra-striped muscle T-shirts and studded belts, out pops **Q*Bert**, the cute, pogo-footed roly-poly who'd make a great cow creamer in another life. Following in the footsteps of MacSoft's other 1980s-style fare (*Centipede*, *Breakout*, and *Pong*), **Q*Bert** springs to life in 3D, but still retains some of the original's gameplay.

In the wake of Bungie, MacSoft also gives birth to **Myth III: The Wolf Age**, a prequel to the original *Myth*, centering on one man—Connacht the Wolf—who leads his tribe of men to take on a race of devils known as the Myrkridia. If you or anyone you know is a fan of strategy games, the *Myth* series is legendary.

For those who aren't, America's favorite pastime is coming to the computer screen. **Survivor: The Interactive Game** puts you in the heart of the Australian outback—and into the claws of Jeri—as you lie, cheat, and steal your way into becoming the ultimate survivor. Play one of the second season's misfits or create a character of your own—just don't piss off the Tribe.



Q*Bert bounces back into our 80s-craving lives.



Black & White lets you play God and Dr. Doolittle at the same time.

Aspyr

Pinhead terrified us in *Hellraiser*, and we can only imagine what wicked wonders Clive Barker will next unleash from up his sleeve. Following in the creepy footsteps of Aspyr's *Alice*, **Clive Barker's Undying** has you doing battle with reanimated humans and motley monsters sure to kick the pants off the meek in this first-person adventure-shooter.

On the lighter side, Aspyr is publishing Pangea Software's **Otto Matic**, with gameplay that resembles Pangea's *Bugdom*. This action-adventure game with a retro, sci-fi feel has you controlling Otto Matic (a robot) as you bounce from planet to planet to stop evil aliens from abducting humans.

Clive unleashes more creepy creatures in **Undying**.





Good and evil
await behind
Baldur's Gate.

MacPlay

Since MacPlay's rebirth, the company has assembled a heavy lineup, with plans to ship everything by year's end. **Baldur's Gate II: The Shadows of Amn**, a real-time strategy game, is the most highly anticipated title from the stable. It expands upon the original storyline as you traverse through the kingdom of Amn, engage in battle, and seal your fate by flirting with good and evil.

Aliens vs. Predator Gold Edition will look familiar to PlayStation fanatics, and now a good year and a half or so later MacPlay brings it to the Mac. Choose to be a Marine, Predator, or Alien and strategize your impending domination as you make your way through 40 levels of caverns, temples, spaceships, and more, obliterating your enemies.



Like MacSoft, MacPlay has a soft spot for the retro, demonstrated by its planned release of **Zork Grand Inquisitor**, a first-person adventure game that follows in the footsteps of the original Zork, released some 20 years ago. This tale also features some retro acting talent—Dirk Benedict (*The A-Team*, *Battlestar Galactica*) and Rip Taylor (*The Gong Show*)—along with 360 degrees of freedom to explore in 3D.

Aliens vs. Predator—Sigourney Weaver's worst nightmare.

SCREENSHOT OF THE MONTH

Forget about staying on the road well traveled—here, Driver gives new meaning to the term *off roading*.



Artist's Statement

A skateboarder's dream when he or she gets a driver's license—to do a boardslide with Mom and Dad's Pathfinder!—*Benjamin Warren*

Send your best screenshots to letters@macaddict.com with the subject line "Screenshot of the Month" if you crave fame and glory (or at least fleeting satisfaction upon seeing your screenshot in a magazine).

's Holiday Wish List

This time of year, we spend our hard-earned cash on the folks who so graciously put up with us day after day. But what's a guy or girl to do when Myth III beckons you to spend the rest of the year huddled up in your room, staring deeply into your Mac's screen, and all you've got left in your pocket is a buck and a quarter? Simple. Just mark off what you want, make copies, and distribute this wish list to everyone you know. Here's a list of games that are expected to ship soon.*

SEPTEMBER 2001

- ☐ **Star Trek Voyager: Elite Force** Expansion Pack Aspyr
- ☐ **Simon the Sorcerer 3D** Epic Interactive
- ☐ **Gorky 17** Epic Interactive
- ☐ **Sheep** Feral Interactive
- ☐ **Baldur's Gate II: Shadows of Amn** MacPlay
- ☐ **Aliens vs. Predator Gold Edition** MacPlay
- ☐ **Giants: Citizen Kabuto** MacPlay
- ☐ **Vampire the Masquerade: Redemption** MacSoft
- ☐ **Fly II** MacSoft
- ☐ **Q*Bert** MacSoft

OCTOBER 2001

- ☐ **Clive Barker's Undying** Aspyr
- ☐ **Age of Empires II: Age of Kings** Bold by Destineer
- ☐ **Links LS 2002** Bold by Destineer
- ☐ **Championship Manager 01/02** Feral Interactive
- ☐ **Zork Grand Inquisitor** MacPlay
- ☐ **Heretic II** MacPlay
- ☐ **Hexen II** MacPlay
- ☐ **Wheel of Fortune Second Edition** MacSoft
- ☐ **Survivor: The Interactive Game** MacSoft

NOVEMBER 2001

- ☐ **iPuppet Classic Cards** Aspyr
- ☐ **Enemy Engaged** Feral Interactive
- ☐ **F1 Championship Season** Feral Interactive
- ☐ **Myth III: The Wolf Age** MacSoft
- ☐ **Jeopardy Second Edition** MacSoft

FALL 2001

- ☐ **Fighter Squadron: The Screamin' Demons Over Europe** MacPlay
- ☐ **Sacrifice** MacPlay
- ☐ **StarFleet Command II: Empires at War** MacPlay

LATE 2001

- ☐ **Icewind Dale** MacPlay

DECEMBER 2001

- ☐ **Otto Matic** Aspyr

TBA

- ☐ **Black & White** Feral Interactive
- ☐ **Max Payne** Feral Interactive
- ☐ **Red Faction** GraphSim Entertainment

*DATES SUBJECT TO CHANGE

how to

It takes more than pro software to be a pro.



Get Great Sound

by Andrew Tokuda

WHAT YOU NEED

- A multitrack audio recording and sequencing program, like Cubase VST (find a Cubase 5 demo on The Disc) or Logic Audio.
- The tutorial audio and Cubase files on The Disc.



This stuff's for the pros.



It'll take some effort, but you can do it.



The fundamentals, if you will.



Find a Cubase VST 5 demo and our tutorial files on The Disc.

The online road to stardom seems so slickly paved these days that it's little wonder millions of computer musicians foolishly believe becoming a recording star is easy. Many music Web sites not only distribute your songs for free, they'll even manufacture your CD and give you the profits.

Rather than spend thousands of dollars for time in a professional recording studio, you—the computer-savvy musician—can save money by investing a few hundred dollars in audio software, rolling up your sleeves, and recording music tracks on your own. So why aren't you touring the world on your newfound success? To put it

WHAT MAKES A GOOD PRODUCTION?

A solid recording sounds pleasant to the ears as an example of its musical genre, whether it's thrash metal or a string quartet. Its bass, midrange, and treble frequencies should be balanced, and the instruments should sound even across the stereo field without overpowering each other (unlike those old Beatles recordings where the instruments played through one speaker and the vocals played through the other).

For this how-to, we'll employ a simple, common band arrangement consisting of drums, bass, guitar, keyboards, and vocals (find these audio files on The Disc). We'll use Cubase VST to work our production magic, but you can import our files into your preferred audio program. Here's the track assignment for our instruments.

- Track 1: Kick drum
- Track 2: Snare drum
- Track 3: Cymbals
- Track 4: Bass guitar
- Track 5: Electric guitar
- Track 6: Keyboards (pad)
- Track 7: Vocals

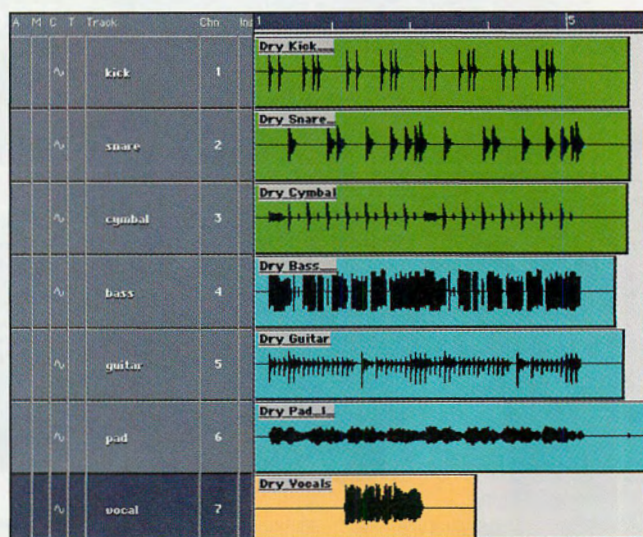
A great-sounding arrangement has an assortment of differently pitched instruments that fill the sound spectrum. The kick drum and bass guitar provide the low end, or foundation. Vocals, keyboards, and guitars cover the middle-frequency range. Cymbals (and the snare drum, to some extent) take care of the high end. Music mixes that don't feature a full-frequency spectrum of instruments may sound incomplete.



Cubase may look daunting, but the interface actually just repeats a few modules.

bluntly, perhaps most of what you crank out sounds like crap. You may have the tools—you may even have the talent—but do you have the recording skills? How do you get those sounds bouncing around in your brain to emanate beautifully from your stereo speakers?

The answer is simple: Develop an ear for high-quality production. We'll show you the basics of mixing audio so you can make any multitrack digital recording sound better. Alone, a good ear won't make your home recording project sound like a \$10,000 studio production, but combine your listening abilities with some know-how and you can make the most of your audio recording investment.



No, we're not measuring earthquakes—these are our tracks in Cubase.

The first step is to recognize what a recording lacks. Listen to master_mono.AIF on The Disc. This is our example song in its raw, or unproduced, state. The instruments reside dead center in the stereo field (equal volumes across the left and right channels), and the mix sounds flat (no frequency correction or enhancement) and dry (no added effects). Now listen to our produced clip, master_final.AIF—the music sounds wider, the instruments are more distinct, and the vocals sound sweeter. In the pages that follow, we'll tell you how to mix this song.

1 Fatten the Kick

Open tutorial_dry.sng (the Cubase version of our raw mix) in Cubase VST (grab the demo from The Disc), and press play on the transport controls. The weak-sounding kick drum is a big problem in this mix. To give it more oomph, change its EQ (equalization).

On Channel 1 (kick drum) of the VST Channel Mixer, click EQ to open the VST Channel Settings window. The four columns on the right side display the EQ settings for the kick drum, and allow you to adjust the character of the sound. Each of the four columns represents a different area of the sound spectrum—low, low to mid, mid to high, and high (left to right). (For more about the parametric EQ, see “Ain’t Music a Pitch!” on p69.)

To fatten up the kick drum, we need to raise the low end. Click Solo to mute all instruments except the kick drum. In the first (far-left) column of the EQ section, click On, set Frequency (pitch) to 266Hz, and set Gain (volume) to 6.4 to give the kick drum more bass. Next, remove some midrange to add definition by setting the third column’s Gain to -1.4, Frequency to 3553Hz, and Q (bandwidth) to 1.0 (see “The Skinny on Bandwidth,” below). Add more snap to the kick by increasing the high end in the fourth column—set Gain to 8.8, Frequency to 9612Hz, and Q to 12.4. Click the Hi Shelf button to disable the wide bandwidth grouping of the high frequencies.

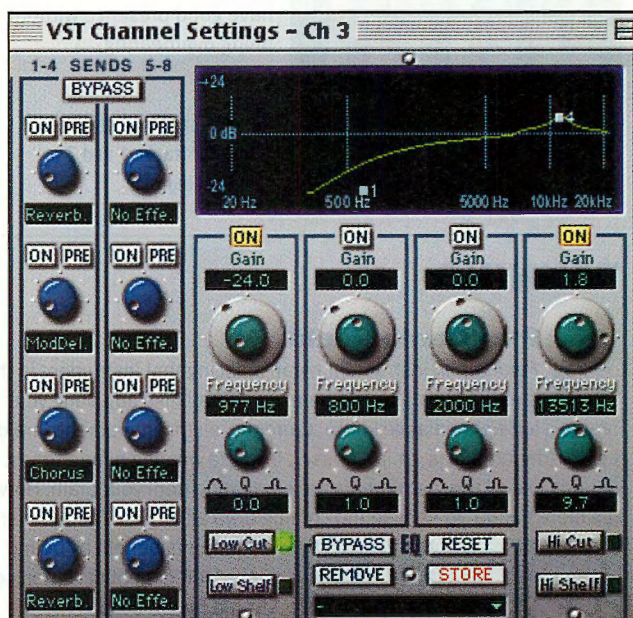


Thanks to this visual representation, sound shaping is easy.

2 Repitch the Rest

Next, adjust the EQ settings for the rest of the instruments. In Cubase, open tutorial_eq.sng to see how we set each instrument’s EQ. This should give you an idea of which frequencies to adjust to enhance each instrument, but you should experiment with the Gain, Frequency, and parametric controls on your own to really hear how each adjustment affects the sound. To view each instrument’s EQ settings, click EQ on any instrument channel to open the VST Channel Settings window. Make these adjustments to your tutorial_dry.sng file.

In the cymbals track (Channel 3), the Lo Cut button is on, and in the Keyboard track (Channel 6), the Hi Cut is on. Use Hi Cut and Lo Cut when you want to turn down, or *cut*, all frequencies beyond a certain frequency point on either end of the sound spectrum. For example, engaging the Lo Cut on the cymbal track gradually cuts out all the frequencies from 977Hz and lower, while a Hi Cut on the keyboard track gradually cuts out the higher frequencies beyond a certain frequency.



Use the Lo Cut and Hi Cut parameters to kill bands below or above a specified frequency.

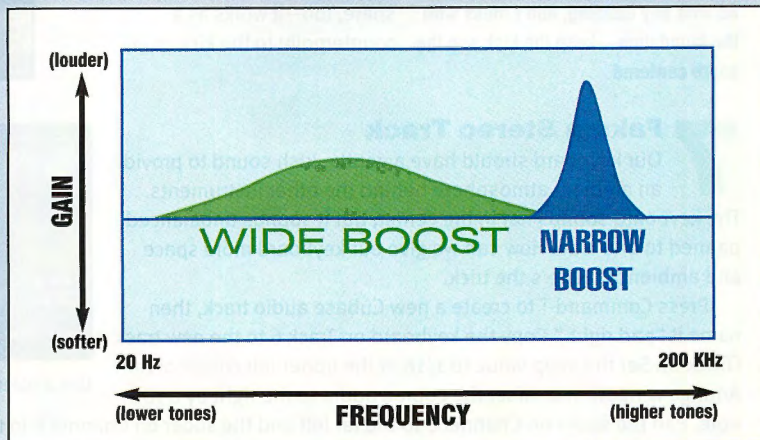
The Skinny on Bandwidth

Setting a wide bandwidth (represented by Q in Cubase) when boosting or cutting a particular frequency affects the neighboring frequencies as well. This is desirable for increasing or decreasing the tone of a sound—for example, bringing a vocal track to the front of the mix or removing the boominess from a kick drum.

A narrow boost or cut on a particular frequency pinpoints and affects this frequency and little else. This is good for adding sizzle to cymbals or eliminating sibilance from vocals.

In Cubase, the smaller the Q number the wider the bandwidth. Thus, dialing up a Q of 13 narrows the bandwidth of a targeted group of frequencies.

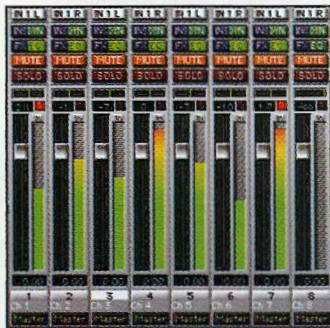
The wider the bandwidth, the greater the range of frequencies affected.



LEVELS

3 Purge the Peaks

Next, set the instrument volumes so they balance each other. Start with the drums. Click the Solo buttons of the first three channels (kick, snare, and cymbal) and press play. If the red peak light is on or pulsating on any channel, lower that channel's level (volume) by dragging down the track's fader (slider) until the light goes out. A red peak light indicates that your sound is *clipping*, or distorting, because the level is too high.



When nothing's peaking, adjust the faders to find a good balance among the drum sounds. The kick and snare should sound even, and the cymbals should have good presence without being overbearing.

No peaking! Lower the faders for tracks 1 and 7 to avoid seeing red.

4 Level the Instruments

Next, add the bass guitar (Channel 4) by clicking the Solo button, and adjust its level so that it's distinct from but not overpowering the drums. Do the same (click the Solo button and adjust the levels) for the guitar, then the keyboards, and finally the vocals. Keep an eye on the peak lights!



This is how our faders looked after we balanced our mix.

PANNING

5 Play Center Field

Panning an instrument means placing that instrument in the stereo field, using the panning control (like adjusting your stereo's left-right balance knob). Currently, all the instruments are dead center (denoted by a <C> in Cubase). If you're wearing headphones, it sounds like all the instruments are emanating from your brain. However, it's more natural to hear sound coming from all angles. Though many



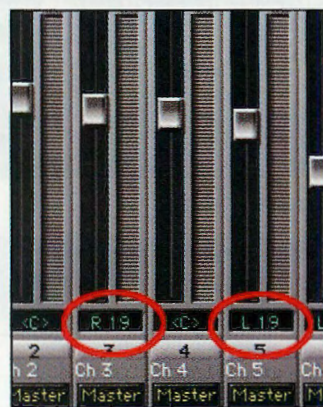
As with any building, don't mess with the foundation—keep the kick and the snare centered.

instruments benefit by being placed left or right of center, some should be left dead center.

As a general rule, keep the kick drum, bass guitar, and lead vocals centered. These instruments lose their foundation if they're off center, and will make your mix sound unbalanced. Center the snare, too—it works as a counterpoint to the kick drum.

6 Push Sounds Aside

Most other instruments—hi-hats (cymbals), for example—typically fall a bit off center, so you should pan Channel 3 a little to the left (most drummers position hi-hats slightly to the left) or right (if the drummer is known to play



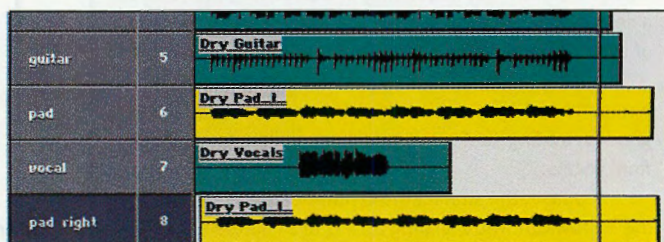
with the hi-hat to his or her right). Don't pan the cymbals too much in either direction or it'll sound like it's detached from the drum kit. You can pan the guitar in either direction. For this song, we placed it opposite the hi-hat to keep everything balanced.

A little nudge left and a push to the right, and you've opened up the stereo space.

7 Fake a Stereo Track

Our keyboard should have a gentle, lush sound to provide an ambient atmosphere behind the other instruments. The keyboard sounds flat in the center, but it sounds unbalanced panned to one side. How can we give our keyboard more space and ambience? Here's the trick.

Press Command-T to create a new Cubase audio track, then name it "pad right." Copy the keyboard on Track 6 to the new track (Track 8). Set the snap value to 1/16 in the upper-left corner of the Arrange window and offset the copied audio to the right by a 16th note. Pan the slider on Channel 6 to the far left and the slider on Channel 8 to the far right. Make sure you adjust the EQ and volume settings of Channel 8 to match those of Channel 6. Open tutorial_panning.sng to hear our example—the keyboard now sounds wider.



One ambient sound becomes stereo ambience by copying and offsetting a track.

EFFECTS

8 Roll Out the Reverb

Audio effects can make your tracks shine. The most popular effects are reverb, delay, and chorus. Most major audio apps have these effects built in. Open VST Send Effects from the Panels menu. Then select Reverb32, ModDelay, and Chorus from the pop-up menus in the first three modules.

The most widely used effect is reverb, which simulates room ambience—from bathroom to concert hall. In popular music, recording engineers use reverb to sweeten or blend sounds, not to make you think a band is playing in a stadium. Therefore, use reverb sparingly, unless you're going for an over-the-top effect.

As a general rule, don't put reverb on the kick drum. The kick drum's role is to establish a pulse, and reverb will muddy the mix and dilute its effect. Adding a little reverb to the snare, however, can make the drum kit sound more lively. On the snare track (Channel 2) of the VST Channel Mixer, click FX—this will bring up the same window that houses the EQ.

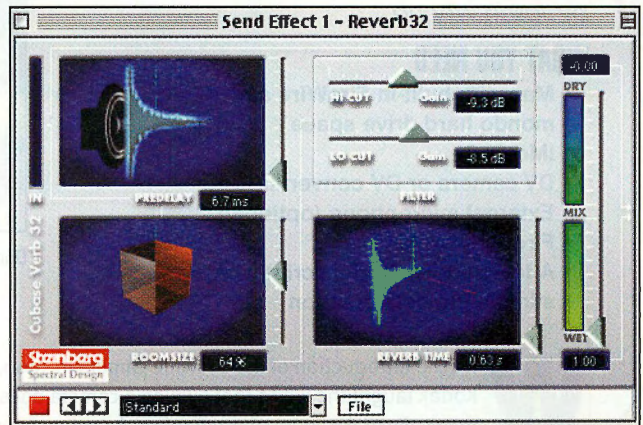


These tried-and-true effects are the most widely used types in music production.

This time, however, we need to adjust the effects section (the two columns to the left of the EQ section). Click the On button above the Reverb module on the Sends 1-4 strip, and then click Solo. Dial up the Reverb knob to hear the effect.

9 Get a Room

The default setting of Reverb32 produces a medium room reverb. We want less reverb, so we need to create a smaller room. Go back to the VST Send Effects window and click Edit on the Reverb32 module to open its window of parameters. Set Predelay to 6.7 milliseconds, Roomsize to 64 percent, and Reverb Time to 0.63 seconds to shorten the effect.



You can build a reverb room of any size by fiddling with these parameters.

10 Bring In the Chorus

The bass guitar would sound better if it were thicker. No problem. Just add a little chorus effect to its channel by turning on the Chorus module and dialing up the effect a tad. A chorus effect modulates audio waves, thickening thin sounds and adding more harmonic excitement to flat sounds.

Add chorus and some reverb to the guitar as well. For the keyboard pad, max out the chorus by cranking its knob up fully, and add a second more of reverb—just select a second



Reverb32 in the VST Send Effects window (in the fourth module) and increase the room size and reverb time to simulate a concert stadium. Note: Adding effects can increase the level of any signal—monitor your peak lights, and lower levels when necessary.

OK, so we maxed out the chorus—sometimes overkill is just right.

11 Create a Delay

For the vocal track, add chorus to thicken the sound, and a delay, which is essentially an echo, to add depth. Set the ModDelay module in VST Send Effects to More Pad in the drop-down menu. Then turn on the module in the Channel Settings window and dial up the effect.

Once you fine-tune the amount of each effect for each



instrument, retweak the EQ settings and volume levels to balance everything again. Check out tutorial_nice.sng to hear our final result. If you have the full Cubase, or an equivalent, mix your tracks down to a stereo AIFF file as your final mix (sorry, the Cubase demo is save disabled).

Applying a delay can be a little too fun—practice some restraint, please.

Ain't Music a Pitch!

One of the most perplexing aspects of mixing is the parametric EQ, which allows you to adjust frequencies within a sound. Most audio applications feature this type of EQ, but to use it correctly you need to know what each knob does.

Frequency The tonal range of sound, measured in hertz (Hz). The human hearing range is 20Hz (low) to 20KHz (high). With a parametric EQ, you can adjust the gain of variable frequency points.

Q (bandwidth) The width of the affected frequency. For example, if you want to get rid of your vocalist's popping Ps, use a narrow Q setting and cut the offending frequency. If you want to give your singer more presence, use a wide Q setting and boost the midrange frequencies.

Gain Basically, a volume control. In EQ speak, you can *boost* or *cut* the gain level of certain frequencies. Boost gain on weak frequencies. Cut gain on overpowering ones.

Edit a Multiple-Angle Scene in iMovie

by Jason Whong

WHAT YOU NEED

- Mac with built-in FireWire and mondo hard drive space
- iMovie 2
- DV camera or DV converter
- External microphone (optional)
- FireWire cable
- A few buddies and a script with stimulating conversation



Find our example movie, "Life's Little Annoyances," on The Disc.

With the introduction of the Brownie camera in 1900, Kodak taught the world that owning a camera does not magically make you a photographer. A century later, Apple is invoking a similar lesson: Owning iMovie doesn't magically make you a video editor—that requires a little extra know-how.

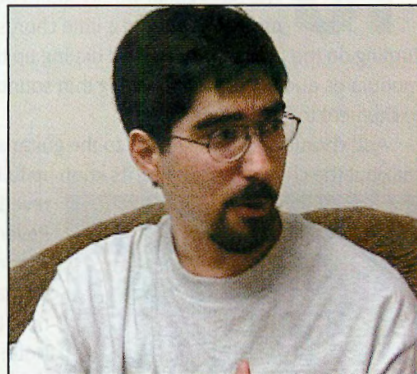
Thanks to our couch-potato habits, most of us already know from watching TV the importance of editing. Well-edited scenes flow flawlessly, with timelines and settings established. Poorly edited scenes can contain more holes than a hunk of Swiss cheese.



Craig.



Chris.



Jason.

ROLL THE CAMERA

Before you begin editing, you need video footage. While we're sure you have more than enough footage to induct your dog, family, and self into the Home Movie Hall of Fame, you'll need to shoot specific sequences for the sake of this tutorial. We'll demonstrate by shooting our own video of a conversation.

A conversation shot taken head on with all gabbers in the frame tends to get boring after about a minute. To make an otherwise dull scene more eye-catching, shoot the conversation from multiple angles. Don't have more than one camera? No problem. Just have your talent perform the scene numerous times while you move the camera to different angles.

To keep audio levels consistent and independent from your camera maneuvers, place a camera-connected external mic so that it's an equal distance from each of the speakers and leave it in that

position throughout your recording session. Shoot close-ups of a person talking, individual shots of a person listening, and long shots that establish the setting.

In our example (view our final movie on The Disc to get an idea of how multiple-angle shooting looks), we feature three people sitting on a sofa, watching television. We shot the scene from four angles—a centered long shot (establishing shot) of all three actors, a centered shot that focuses on Craig (the actor seated in the middle of the sofa), a shot recorded from the left that focuses on Chris (seated on the right from the viewer's perspective), and a shot recorded from the right that captures Jason (seated on the left). Though having to run the same lines over and over can be tiring, the individual shots highlight the actors, providing plenty of material for editing the scene. Follow our example, but feel free to take artistic license.



Don't change that channel! Learn to edit your own movie like a pro.

If movie making is your goal, going from raw DV footage to the final cut should never happen by chance; every shot change requires serious decision-making. While we can't tell you precisely how to come to this decision, we *can* help you start thinking like a filmmaker—and show you how to edit a multiangle scene like a pro using iMovie 2.

We'll tell you how to shoot a conversation scene to make it more visually stimulating, and how to use iMovie to edit your footage into a more compelling scene. We'll also tell you how to whip your Mac into iMovie-editing shape and introduce you to some of the program's advanced features.

GET SET TO EDIT

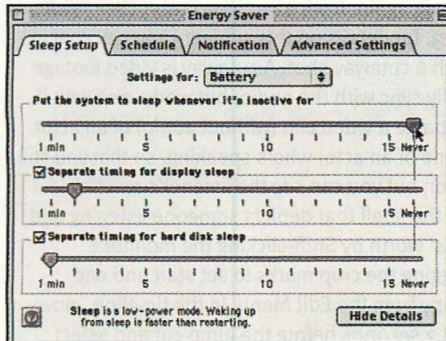
You've got footage—but don't expect to dive into iMovie without first making a few necessary adjustments to your Mac.

Prime Your Mac

iMovie is not compatible with the sleep mode, so turn off this option in the Energy Saver control panel in Mac OS 9, or in the Energy Saver system preference in Mac OS X. Also disable any screen-saver apps. If you have less than 128MB of RAM under Mac OS 9.x, enable Virtual

Memory. Also, since iMovie-captured video eats up about 210MB per minute, do some serious hard drive clean-up.

Your Mac will thank you for telling it not to sleep while iMovie is running. Trust us.

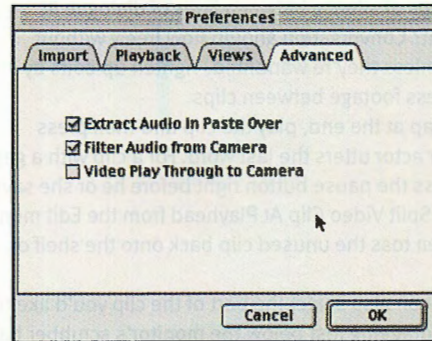


Set Movie Preferences

Launch iMovie. From the Edit menu, select Preferences. Click the Import tab and check the Automatically Start New Clip At Scene Break box. This allows you to import a batch of separate video clips (as opposed to one long segment), according to the breaks between camera shots. Then

click the Advanced tab and check the Extract Audio In Paste Over box. This option allows you to perform video-only edits. Click OK to save your changes.

Extract Audio In Paste Over allows you to perform video-only edits, independent of audio.



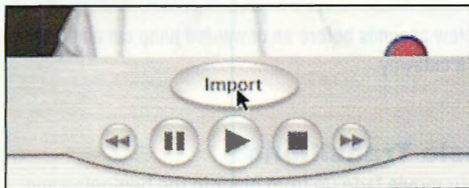
CAPTURE AND COORDINATE CLIPS

After you've shot your scene, you're ready to fine-tune what you have. With patience, you can edit the shoddiest footage into an artistic triumph—well, you can try.

1 Import the Video

Connect your DV camera (or DV converter with analog-connected camcorder) to your Mac's FireWire port. In iMovie, set the monitor window to camera mode (set the toggle to the DV icon). Locate your footage in the camera using iMovie's playback controls, and then click Import—iMovie will capture and separate the

clips into the Clips panel, or shelf. When finished, switch the monitor window to edit mode (the filmstrip icon).



Click the Import button to capture your clips.

2 Organize Raw Clips

To keep track of your footage (especially if shots have similar thumbnail images), name your clips by clicking each one's name in the shelf and typing a meaningful description. If a clip contains multiple shots, segment it by moving the playhead in between two shots and selecting Split Video Clip At Playhead from the Edit menu.

The end result will give you two independent video clips.

Use short but sweet names to keep your clips organized.



3 Make a Rough Cut

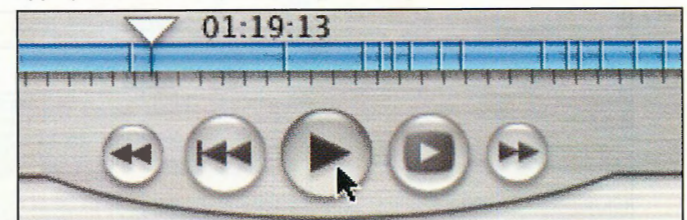
Decide which clips to use, then sequence them by dragging and dropping clips from the shelf onto the timeline so their order shows a progression. Start with the establishing shot and move to medium shots or close-ups as the dialogue progresses. Make sure the dialogue flows in the correct sequence, according to the script. Don't worry if the video isn't perfect—we'll show you how to fix it later.



Drag clips to the timeline in the desired playing order.

4 Preview Your Work

Check your editing progress by viewing your work in the monitor window—click the home button (the double left arrows with a straight line) and press the play button to view the scene. Make sure the dialogue flows logically and you haven't inadvertently left out a piece of it. If so, find the missing clip in the shelf and sandwich it into the appropriate timeline spot via drag and drop.



The scrubber bar (above the play controls) shows a tiny break for every edit and transition in your sequence.

MAKE THE FINAL CUT

Now for the most time-consuming part—tweaking your edits to perfection. This is the step that distinguishes the pros from the novices.

1 Tighten the Audio

Notice any gaps of silence between lines of dialogue in your rough cut? Conversation should flow freely without noticeable pauses, unless they're warranted. Tighten up edits by getting rid of the excess footage between clips.

For a clip with a gap at the end, play the clip and then press pause right after your actor utters the last word. For a clip with a gap in the beginning, press the pause button right before he or she says the first word. Select Split Video Clip At Playhead from the Edit menu to divide the clip. Then toss the unused clip back onto the shelf or into the Trash.

Alternatively, you can also select the part of the clip you'd like to keep by clicking and dragging just below the monitor's scrubber bar, then selecting Crop from the Edit menu. If you goof up, you can always undo your work.

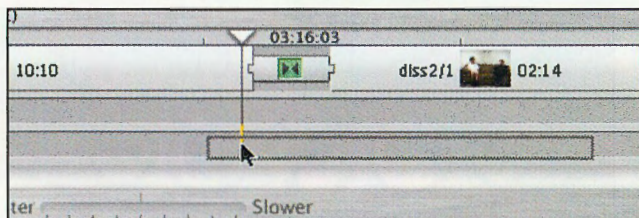


The yellow bar represents our selected video. When we crop this clip, we'll cut out the blue part, which is visible to the right of the playhead.

3 Add Sound Effects and Music

For a well-rounded production, add sound effects by dragging audio files from the Audio panel to the timeline's audio track. Click the Audio button to reveal the Audio panel, then click any sound effect to preview it. Keep in mind that overusing sound effects can spoil a production. At the same time, a well-timed sound effect can complement a scene. Use your best judgment, and know when to reel it in.

If you want to add music, use tracks you actually have permission to redistribute, or you won't be able to show your iMovie legally. If the music soundtrack is your iMovie's most important aspect, add the track to the timeline before you begin your rough cut.



Though the sound effect (the dotted rectangle) looks like it lasts a long time, your settings determine its actual duration.

2 Fix and Polish the Video

Watch the movie again. Notice any jump cuts? (See "Video Verbiage", p73, for details on this subject.) You can conceal any flawed editing with a cutaway shot. A cutaway is video footage that doesn't necessarily sync with the audio, but works well with it. For example, you can paste a video clip (without audio) of an actor who's listening over one of an actor who's speaking, so that you still hear the speaking actor, but you can see the listener's reaction.

Locate any shot in the shelf that depicts someone listening and select about 5 seconds' worth by Shift-clicking the monitor's scrubber bar and dragging the crop marks to set start and end points. Then select Copy from the Edit Menu. In the timeline, move the playhead to about 2 seconds before the jump cut and select Paste Over At Playhead from the Advanced menu. Match the onscreen action carefully if the shots require it, and play back the video to inspect your work.



Place the playhead a few seconds before an unwanted jump cut and then conceal that cut with a cutaway.

4 Add Basic Transitions

To make your movie fade up from black in the beginning and fade to black at the end, apply a transition. Click the Transitions button to reveal the Transitions panel. Drag the Speed slider to 00:14. In the timeline, drag and drop the Fade In transition in front of your first clip and the Fade Out transition at the end of your last clip.

You can add more transitions to signify a change in time or setting or to show a relationship between two clips. Use the Push transition to denote the passage of time or a change of scenery. Use the Cross Dissolve or Overlap to juxtapose related shots within a scene. Whatever you do, use transitions sparingly. Nothing screams "amateur" like a movie with a thousand unnecessary transitions.



We used two similar shots and the Cross Dissolve transition to make Craig slowly disappear.

THE FINISHING TOUCHES

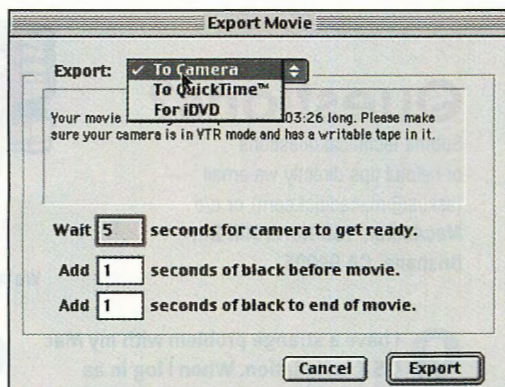
When you get to the point where your dialogue flows logically and consistently and your editing looks smooth and controlled, it's time to put your movie in the can.

Export Your Movie

We recommend saving two copies of your movie: one high-quality version, exported to DV camera tape for your archives (in case you want to work on it again), and one lower-quality version for distribution via the Internet. From the File menu, select Export Movie. To export your work back to your DV camera, select To Camera from the Export drop-down menu, and make sure your camera is connected and ready to record.

For email or the Web, select To QuickTime from the Export drop-down menu, and then choose the desired size and compression of your movie from the Formats drop-down menu. Keep in mind—the higher the compression, the smaller the file, and the worse it looks. Then click Export to render the movie. You may need to experiment with the compression settings until the results satisfy you.

Export one copy of the movie to your camera so you have it in your archives.
Export another copy to QuickTime for viewing on the Web or in email.



iMovie Impasse?

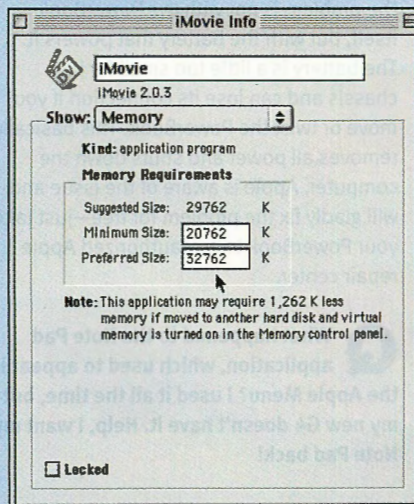
If iMovie 2 runs slowly or crashes, you can improve its performance with these additional tweaks.

Mac OS 9

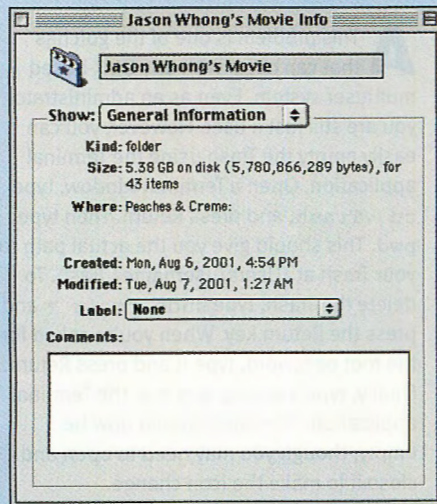
- If you have at least 128MB of RAM, turn off Virtual Memory in the Memory control panel and reboot.
- Increase iMovie's preferred memory size by 3,000K. Increase it more if iMovie complains about running out of memory or stops playing sound.

Mac OS 9 and Mac OS X

- If iMovie complains that disk performance is too slow for video capture, defragment your hard drive.
- Quit other applications—especially processor-intensive ones. You may like to listen to music while editing, but an MP3 player running in the background can impede iMovie's performance.



If iMovie runs sluggishly or complains about running out of memory, increase its preferred memory size by 3,000K.



We're not kidding when we say clean out your hard drive—our movie hogs over 5GB of space. And defrag your drive for optimum performance.

Video Verbiage

People in video production frequently use their own language to describe the production process. Here are the translations.

Establishing Shot A shot that establishes the setting of a scene for the viewer. This is usually a long (faraway) shot of an entire scene, or an exterior shot of a building where action is taking place. Always start a scene with an establishing shot so your viewers have some idea where they are.

Cut Placing one shot after another without using a transition. Cuts are often used for jumping back and forth between people involved in a conversation, or for editing a series of fast-action shots that you need to tie together sequentially.

Jump Cut A jarring edit that jumps through space and/or time. Say you place a shot of a smiling actor immediately after a shot where the same actor isn't smiling—you could consider that a subtle jump cut. However, if the actor also happens to be standing in the wrong place and is no longer carrying an umbrella, the jump is obvious.

Cutaway A shot that moves away from the action; it can include a jump cut. A common cutaway is a clip showing the reaction of an actor as he or she listens to another actor speak.

Raw Footage Unedited video.

Talent The people or animals who perform on camera.

Matched Action An action that continues consistently across a series of cuts.

ask us

Ask, and ye shall receive.

Questions?

Submit technical questions or helpful tips directly via email (askus@macaddict.com) or c/o **MacAddict**, 150 North Hill Dr., Brisbane, CA 94005.

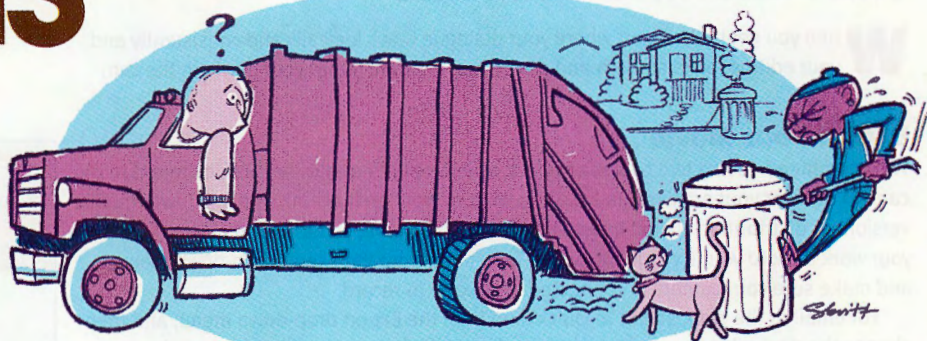
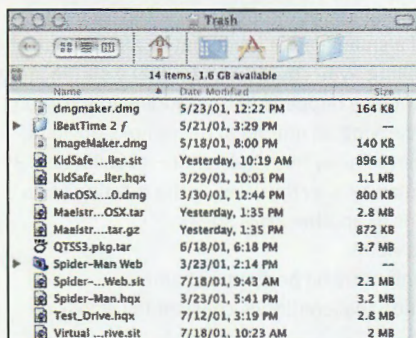
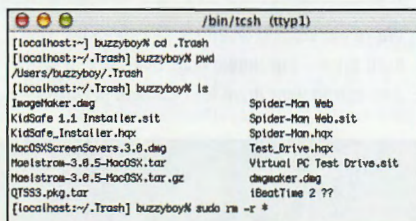


ILLUSTRATION BY S. BRITT

We have no problem talkin' trash, but sometimes emptying it can be a problem.

Q I have a strange problem with my Mac OS X installation. When I log in as myself, even though I am an administrator, I can't empty certain files in the Trash—it says I don't have enough privileges. What is going on and how can I empty these files once and for all?

A This problem is one of the gotchas that can occur with any Unix-based multiuser system. Even as an administrator, you are still just a user. However, you can easily empty the Trash using the Terminal application. Open a Terminal window, type `cd .Trash`, and press Return. Then type `pwd`. This should give you the actual path to your Trash at `/Users/username/.Trash`. To delete the Trash, type `sudo rm -r *` and press the Return key. When you're asked for the root password, type it and press Return. Finally, type `logout` and quit the Terminal application. The Trash should now be empty, though you may need to open and close it to make the icon change.



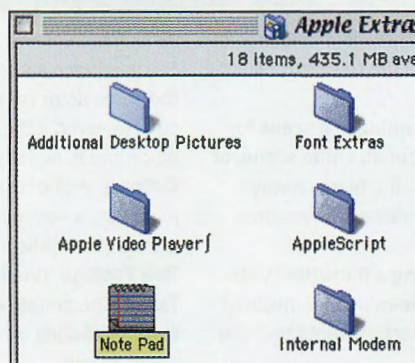
You can remove troublesome Trash via the Terminal.

Q My PowerBook G4 sometimes turns itself off. This seems to happen when I pick it up or move it. What's up?

A What you've run across is a minor issue that cropped up with some of the first PowerBook G4s produced. Actually, the problem is not with the PowerBook itself, but with the battery that powers it. The battery is a little too small for its chassis and can lose its connection if you move or twist the PowerBook. This basically removes all power and shuts down the computer. Apple is aware of the issue and will gladly fix the problem for free—just take your PowerBook to any authorized Apple repair center.

Q What happened to the Note Pad application, which used to appear in the Apple Menu? I used it all the time, but my new G4 doesn't have it. Help, I want my Note Pad back!

A Your wish is our command. Actually, it never went away—Apple just made the odd decision to remove it from the default Apple Menu list. You can find it in the Apple Extras folder. To put it back in its rightful place, just move the app into the Apple Menu Items folder inside your System Folder.



There you are...oh, little Note Pad, I'll never let you out of my sight again!

Q I just inherited a MiniDisc recorder and player from a friend and would love to transfer some of my MP3s to it. How can I use my Mac to send music to my MiniDisc player?

A Think of the MiniDisc recorder as a really high-quality tape recorder—it records audio signals in real time. To record your MP3s to your MiniDisc recorder, you need to get the signal out of your Mac and into the MiniDisc. If your recorder has an analog input, simply hook this to the speaker output on your Mac, press the Record button on the MiniDisc, and play a song on your Mac.

If you want the pristine quality of digital transfer, you'll need some extra equipment. Many MiniDisc recorders have an S/PDIF (Sony and Philips Digital Interconnect Format) input. This digital-audio transfer port is a great way to transfer data without loss. The problem is finding a way to connect S/PDIF-equipped devices to a Mac. One of the best ways, though not an inexpensive option, is Edirol's Roland UA-30 (\$198, www.edirol.com), which we mentioned in last month's Ask Us column. This USB audio interface has an S/PDIF output, perfect for connecting a MiniDisc recorder or any other digital-audio device.



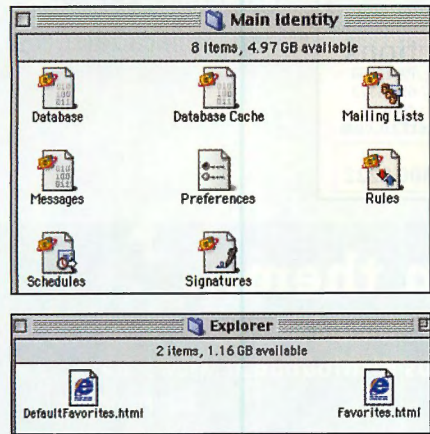
The Roland UA-30 connects everything from MiniDiscs to guitars to your Mac.

PHOTOGRAPHY COURTESY OF EDIROL

Q I need to move some things to a new Mac, namely my Microsoft Outlook Express mail and Microsoft Internet Explorer bookmarks. What do I need to transfer to keep this information intact?

A The secret to keeping your Outlook Express information intact (all your mail, contacts, configurations, and folder organization) is knowing what folder holds all of this data. Look inside your Outlook Express folder for a folder called Identities (or you might find Identities in a folder titled Microsoft User Data in your Documents folder). This contains a folder for each Outlook Express account. Transfer these folders to your new computer's Identities folder and you're good to go.

As for your Internet Explorer bookmarks and settings, transfer the Internet Preferences file in your System Folder's Preferences folder. Your bookmarks (called Favorites in Explorer) are stored inside the Explorer folder, also located in the Preferences folder. Simply transfer the entire Explorer folder to your new Mac's Preferences folder, and everything will be just as it was before. If you want to do this with Netscape, transfer the entire Netscape Users folder from the Preferences folder to your new computer to maintain its settings.



Stay connected by transferring these files (OE above, IE below) to your new Mac.

Q I currently run Mac OS X on my G4. Would I benefit from an upgrade to Mac OS X Server?

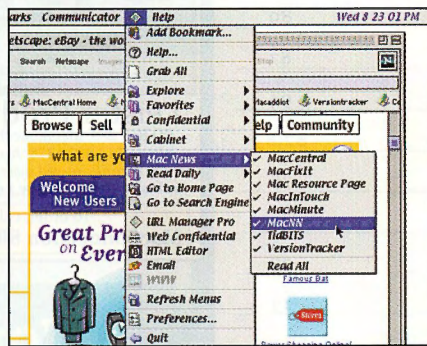
A If you need your Mac to act as a server of any kind, the client version of Mac OS X offers everything you need. What it *doesn't* have is Apple's easy-to-use setup and administration software (found in Mac OS X Server)—and without this, most server

software is a bear to install and configure. But unless you need to set up a dedicated file server, Web server, mail server, or DNS server, you don't need Mac OS X Server.

Q Browsing the Web has become my favorite pastime, but my list of bookmarks is getting ridiculously long. Can I tame my superlist and make it more manageable?

A The easiest solution is to use your browser's built-in organizational tools. Choose Organize Favorites from the Favorites menu in Microsoft's Internet Explorer, or Edit Bookmarks from the Bookmarks menu in Netscape Communicator, to create folders and dividers that you can use to organize your lengthy list.

The problem with this method is that you're doing the organization after the fact. First you add the bookmark, then you put it where you want it in the hierarchy you've created. For better bookmark management, check out URL Manager Pro (\$25, www.url-manager.com). This helpful shareware utility lets you save bookmarks to a specific folder. It takes a little setup, but adding Web sites is a breeze thereafter.



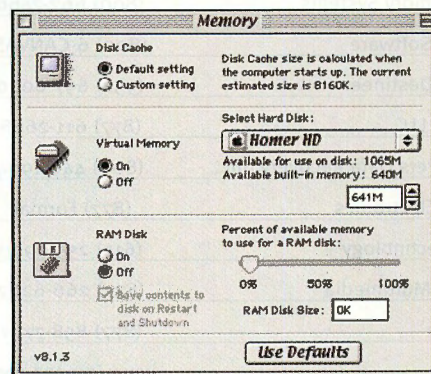
Forget your browser's built-in bookmark organizer—get serious help with URL Manager Pro.

Q I recently upgraded my G3 desktop computer with more memory and a CD burner, but somehow I lost some of my hard drive space. I don't even have enough room to create an audio CD from my MP3 collection. Where did it all go?

A This vanishing act could stem from a number of sources. The most probable cause lies in the Memory control panel. If you have Virtual Memory enabled, your Mac will treat the allotted hard drive space as RAM. For example, if you set Virtual Memory to 513MB, your computer has 513MB less of hard disk space. The solution is to turn Virtual Memory

off, which isn't a bad idea if you just installed a lot more memory.

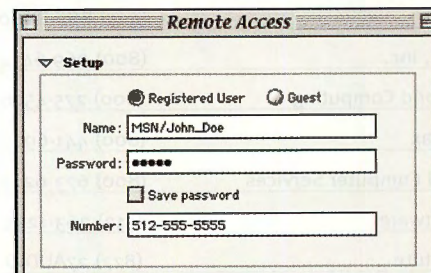
If that doesn't solve the problem, you may have come across the Photoshop 6 temp files issue, where these files don't get deleted from the invisible Cleanup At Startup folder—you can clean them out with SearchWare Solutions' Eradicator (free, www.swssoftware.com). Yet another possibility is, if you created a CD with Disc Burner, the image may be lingering in your Preferences folder. Look for a file called DiscBurnerImage and delete it to free up to 700MB of disk space.



Depending on how high you set it, Virtual Memory can eat up a large chunk of your hard drive.

Q My parents just got me a new iMac, but they insist that I use our existing MSN Internet account. How can I access MSN on my Mac?

A You can easily connect to an existing account from your Mac—all you need is your MSN member ID and the phone number for the local MSN dial-up service. First set up the TCP/IP control panel by choosing PPP from the Connect Via pop-up menu and DHCP Server from the Configure Using menu. Next, open the Remote Access control panel and set the Registered User name to MSN/*user name*, where *user name* is your MSN member ID. The secret here is to put the MSN/ in front of the ID. Finally, just type your password and the phone number, and you're free to roam.



The MSN Internet account requires that you put your name in a special format.

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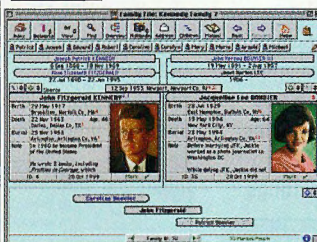
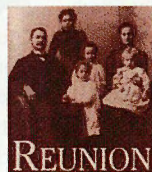
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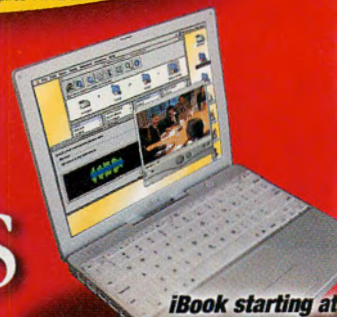
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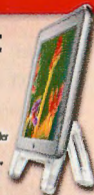


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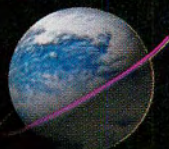
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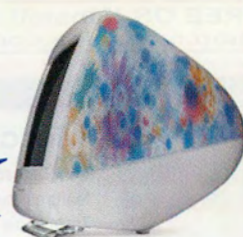
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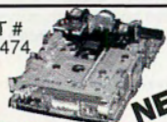
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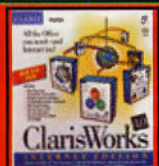
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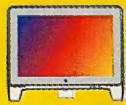


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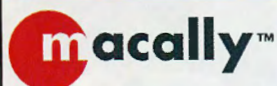
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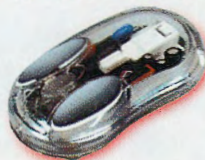


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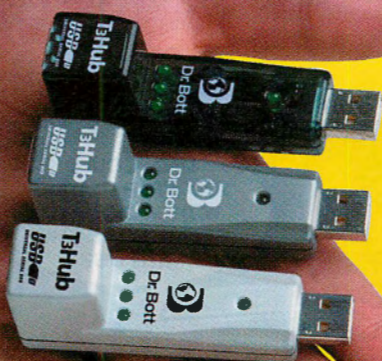
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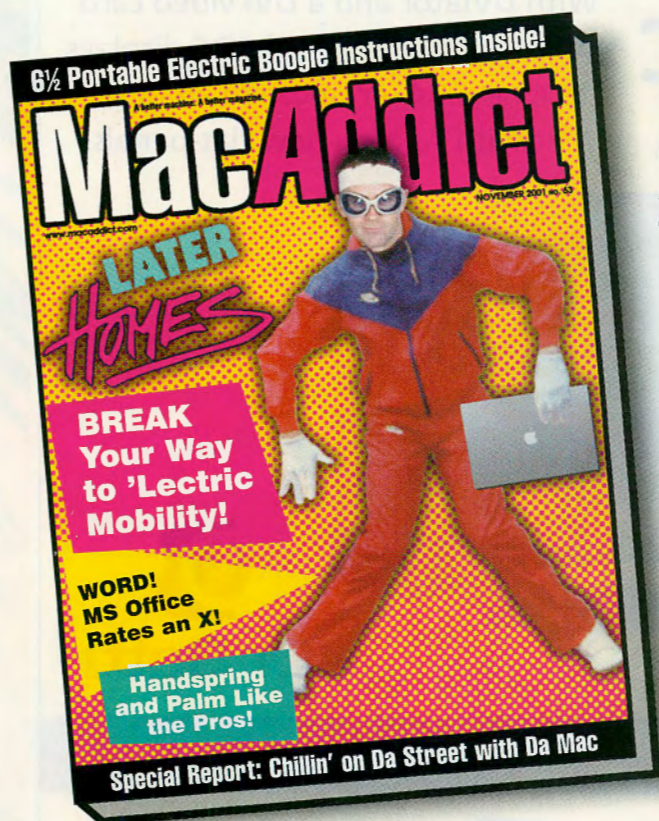
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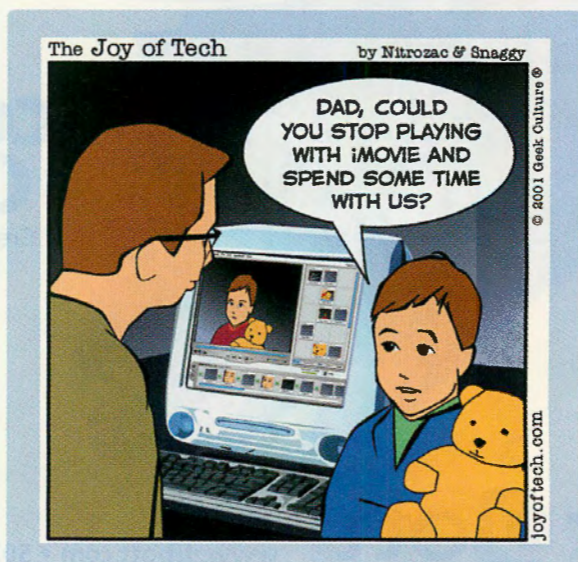
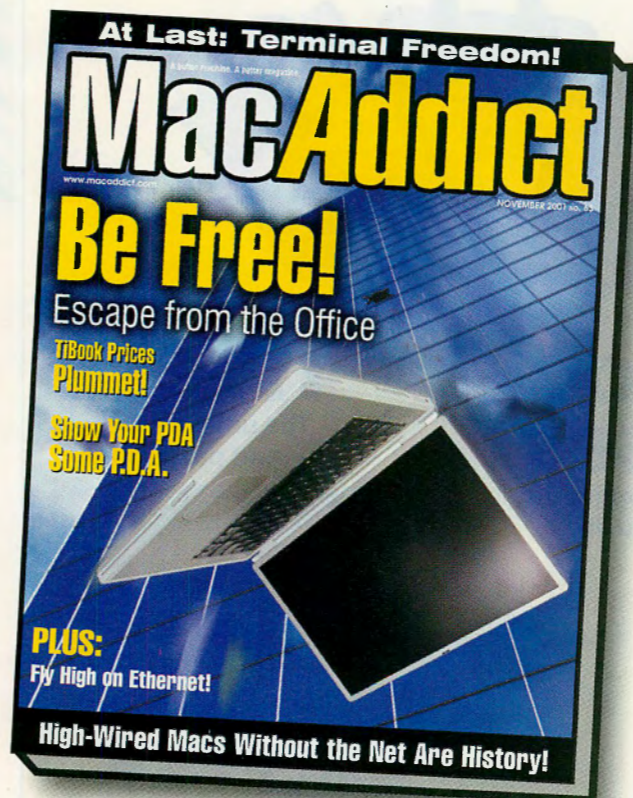
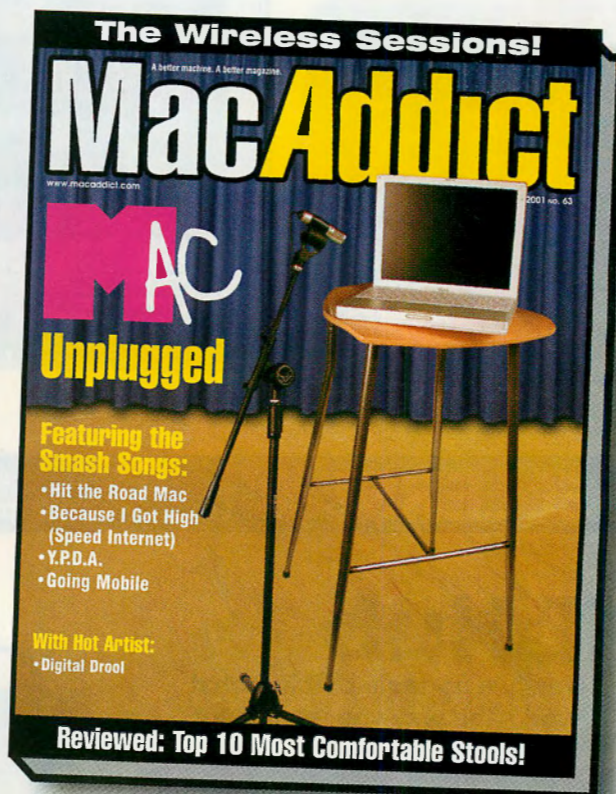
shut down

News from a parallel universe.



Alternate Covers, Uncovered

Our art staff was so chock full of ideas—and caffeine—this month that when it came time to choose the cover, we had to take the rock-paper-scissors approach. Nonetheless, we thought we'd share a few of November's cover losers, er...runners-up.



In with the new...



TechTool Pro 3 is the super utility for your Macintosh. Besides repairing and recovering data, TechTool Pro can help you circumvent problems in the first place. Our new virus detect and repair feature, as well as our software conflict check feature, lets you keep your computer in tip-top shape. When booted from the included emergency CD, you can even check, repair and optimize your OS X computer.

Every day, more and more Macintosh professionals are choosing TechTool over other system utilities. In fact, even Apple Computer includes TechTool Deluxe with every copy of their AppleCare™ Protection Plan. Simply put, TechTool Pro 3 is the most complete and powerful troubleshooting utility available for your computer. Why would you settle for anything less?

In with the newer...



For Apple's next-generation operating system, you'll need a next-generation disk utility. That's why Micromat has introduced Drive 10, the first and final disk utility for Mac OS X. Problems with your drive? Drive 10 can repair almost any drive problem with one simple click of your mouse. All within OS X's native environment.

While Drive 10 is a new product, it is derived from TechTool Pro, Micromat's world-class diagnostic and repair utility. Using TechTool's time-tested routines as well as some new routines developed exclusively for OS X, Drive 10 offers many tools for checking and repairing any drive on your system. Don't entrust your OS X drive to ancient utilities. Protect your data and drive safely with Drive 10.



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to

enlarge a small fish:

- 1) Using your pen for ease and control, draw a path around your small fish. Then copy your selection.
- 2) Paste your fish back into your photo, creating a new layer.
- 3) Adjust the scale of your new layer to your liking, and place it.
- 4) With the blur tool, blur the edges of the fish for realism.



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